

CHAPTER 5

Project Variants

The proposed Project includes two variants. These potential project features are identified as variants because they are elements of the Project that are sufficiently complex that they warrant their own, separate analysis. The variants are not “alternatives” within the meaning of CEQA, however, in that they address specific elements of the Project, and are not alternatives to the Project as a whole. In addition, they are identified as variants, rather than elements of the project description included as part of the proposed Project. The reason why these two elements are included as variants is described below in the sections of this chapter describing and analyzing each variant; thus, there is no way to determine at this time whether the variants can be implemented. They are included as variants so that they can be incorporated into the Project in the event the necessary land can be acquired and/or the necessary approvals can be obtained. The two variants are initially introduced in section 3.18 of Chapter 3, *Project Description*, with full descriptions provided in this chapter, and are addressed in the following sections of this chapter:

- 5.1 Peaker Power Plant Variant
- 5.2 Aerial Gondola Variant

The location of the variants relative to the Project site is depicted in **Figure 5-1, Variant Key Plan**. **Figure 5-2, Maximum Building Massing Model and Height Plan - Variants**, illustrates the proposed Project with variants. The two variants are not mutually exclusive. Either or both could be incorporated into the Project.

Chapter 4 of this Draft EIR analyzes the proposed Project without any of the variants. This chapter describes each variant and presents an analysis of the Project *with* each variant. The analysis starts by identifying the applicable study area and environmental setting, if these are different from those presented for analysis of the proposed Project (analyzed in Chapter 4). This analysis then identifies environmental impacts and/or mitigation measures associated with the proposed Project *with* each variant, if these are different from those presented for analysis of the Project. Significance thresholds and the approach to the analysis are consistent with those presented in Chapter 4. Section 5.3 discusses impacts that would occur if the Project was included with both variants, and Section 5.4 discusses the Maritime Reservation Scenario with both variants. Also, **Table 5-14, Summary of New and/or Different Impacts and Mitigation Measures with Variants**, is included at the end of the chapter and summarizes the impacts and/or mitigation measures identified that only occur with the Project Variants.

Figure 5-1 Variant Key Plan

Figure 5-2, Maximum Building Massing Model and Height Plan - Variants

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5.1 Peaker Power Plant Variant

5.1.1 Background

The existing Oakland Power Plant (referred to in this EIR as the Peaker Power Plant) located on the Project site is under a Federal Energy Regulatory Commission (FERC) jurisdictional Reliability Must-Run (RMR) agreement between the California Independent System Operator, Corporation (CAISO) and Dynegy Oakland.¹ The RMR agreement gives CAISO the right to call in the OPP to operate anytime it is needed for system reliability, and to ensure there is enough on-hand generation to satisfy local reliability needs. Each year CAISO makes a determination regarding the continued need to operate the Peaker Power Plant for system reliability, and the RMR agreement provides CAISO with the unilateral right to extend the RMR agreement for another calendar year on an annual basis. At this time, CAISO has indicated that it expects the RMR agreement to continue through at least 2022.

While the termination of the RMR agreement must come before shut down of the Peaker Power Plant, termination of the RMR agreement will not result in the shut-down of the Peaker Power Plant, since the RMR agreement does not require the Peaker Power Plant to shut down when the RMR agreement terminates.

In order to address the system reliability issues currently addressed by the Peaker Power Plant, as well as other clean energy initiatives, Pacific Gas & Electric (PG&E) and CAISO developed the Oakland Clean Energy Initiative (OCEI). The OCEI is a plan that, when completed, would allow the RMR agreement to be terminated. A Vistra Energy battery storage project with East Bay Community Energy (EBCE) is one of several battery storage projects and energy initiatives that are proposed for the OCEI. However, Vistra intends to operate the Vistra-EBCE battery storage project in parallel with the Peaker Power Plant. Hence, both the Vistra EBCE battery storage project and the Peaker Power Plant are expected to operate simultaneously, while the RMR agreement continues to be in place, and may continue to do so after the RMR agreement is terminated as well.

The Oakland A's are negotiating an agreement with Vistra that will require the shutdown and decommissioning of the Peaker Power Plant, by contract. The contract would require that the permanent shut down of the Peaker Power Plant occur within no more than six months following termination of the CAISO RMR agreement. In addition, under the Oakland A's-Vistra Contract, the future site configuration and use will provide for and allow the contemplated battery storage facilities and would further provide that no party other than the Oakland A's would be permitted to seek or obtain GHG emission credits for the permanent shut down of the Peaker Power Plant (Oakland A's, 2019).

¹ Dynegy Energy is a wholly owned subsidiary of Vistra Energy.

5.1.2 Description

The Peaker Power Plant Variant involves the planned conversion of the existing Peaker Power Plant) to a battery energy storage system (referred to throughout as “battery storage”) and physical changes to the buildings, as described below.² The conversion of the Peaker Power Plant from the use of jet fuel to battery storage would be implemented by its owner, Vistra Energy, with participation by the Project sponsor. Vistra Energy has indicated that the estimated increase in power demand to serve the proposed Project would make the planned conversion economically feasible. The conversion is considered a variant in this EIR because Vistra Energy, as the land owner, has the authority to decide when, and if, the Peaker Power Plant would shut down, or continue to operate, after the RMR agreement has been terminated, and a contract is under negotiation between the Oakland A’s and Vistra to require the shut down and decommissioning of the Peaker Power Plant.

As shown in **Figure 5-3, Peaker Power Plant Site Plan**, this variant addresses the U-shaped building at 601 Embarcadero West occupying the parcel south of Embarcadero West between Martin Luther King Jr. Way (MLK Jr. Way) and Jefferson Street and the fuel storage tank to the east.³ This building has been historically associated with both the fuel storage tank east of Jefferson Street and the block occupied by 101 Jefferson Street. Together, 101 Jefferson Street and 601 Embarcadero West comprise the PG&E Station C API,⁴ a historic resource for the purposes of CEQA (see **Appendix CUL-1**). The variant site is included within the Project site boundaries (locations “1” in Figure 5-1). **Figure 5-4, Existing Peaker Power Plant Site - Aerial**, shows the existing variant site condition and configuration. **Figure 5-5, Existing North Wing and Smoke Stacks**, shows the existing appearance of the structure from Embarcadero West. **Figure 5-6, Proposed Battery Energy Storage System Layout Plan**, details key energy conversion components of the variant within the existing PG&E Station C site. **Figure 5-7, PG&E Station C API**, shows the building in the context of the historical resource area.

The Project sponsor is seeking to acquire the Peaker Power Plant and if it does so, the variant will include both interior and exterior modifications to the building. The interior modifications will include the conversion of the power plant to a battery storage facility. The exterior modifications will include shortening the existing wings of the building. The proposed modifications to the building exterior proposed in the variant will widen the space between the building and the

² The Peaker Power Plant serves the critical function of providing power to jurisdictions to cover “peak” energy demand periods.

³ Prior historic resource documentation on both DPR 529 forms and on Oakland Cultural History Survey forms used a number of addresses to denote the subject building at 601 Embarcadero West. These stem from a series of construction projects between 1888 and 1938, in which smaller buildings were joined or additions made to result in the current U-shaped configuration that remains today. These addresses include: 601, 605, 629, 635, and 645 Embarcadero (also noted as 601-645 Embarcadero), 64, and 74 MLK, Jr. Way (formerly Grove Street), and 51 and 75 Jefferson Street. See Appendix CUL-1 for more information regarding the history and context for 601 Embarcadero West.

⁴ Areas of Primary Importance (API) are City of Oakland zoning designated historic resources for the purposes of CEQA

Figure 5-3, Peaker Power Plant Site Plan

Figure 5-4, Existing Peaker Power Plant Site – Aerial

Figure 5-5, Existing North Wing and Smoke Stacks

Figure 5-6, Proposed Battery Energy Storage System Layout Plan

Figure 5-7, PG&E Station C API

proposed ballpark – particularly pedestrian access to the new ballpark. The Project variant therefore proposes a different site plan than the proposed Project, because the proposed Project retains the existing exterior building form and massing of the Power Plant building and does not modify the Project site accordingly. This variant would also include redevelopment of the fuel tank site, as described in more detail below.

As discussed in detail in Section 4.4, *Cultural and Tribal Cultural Resources*, the PG&E Station C API, including 601 Embarcadero West, is a local historic resource (Oakland Cultural Historic Survey [OCHS] rating of A1+) and appears to be eligible for listing in the National Register of Historic Places (NRHP). (Detailed descriptions of the architecture and conditions of the buildings are included in Appendix CUL-1, to this Draft EIR.)

New Power Generation Operation

Conversion of the existing power plant from fuel storage to battery storage would involve a lithium-ion battery facility with twenty hours energy storage to power a conversion system that provides green energy by means of storing excess energy. The batteries would be charged locally and store energy until they are needed, . The system would be connected directly to Project load electrically behind the PG&E meter – that is, after electric deliveries to the Project are metered. The battery system would be charged using power imported through the PG&E connection and it would be dispatched directly to Project load through newly constructed electric lines. The new lines would be owned by the Applicant and maybe located underground.

This variant could be implemented with the Project in Phase 1 or prior to Buildout. The battery conversion and most of the interior building modifications proposed Project are specifically for the purpose of converting the Peaking Power Plant to a battery storage facility as discussed below, and all work would be completed during the scheduled construction of the proposed Project. The impact analysis conservatively assumes that this variant will be constructed and commence operations in Phase 1 because that is the scenario in which the variant's impacts will be greatest, particularly with respect to air pollutant emissions during construction.

Proposed Building/Site Changes for the Conversion to Battery Storage

Minimal physical changes to the exterior of the existing building at 601 Embarcadero West are required to accommodate the proposed battery conversion. Changes would also occur to the interior of the building in order to implement the conversion to battery storage .As part of the conversion, the site would be disconnected from the adjacent fuel storage tank. The anticipated changes to the exterior of the facility would be the removal of the current jet turbines, including the black smoke stacks from the courtyard, and the placement of the new power conversion system and transformers in the existing outdoor courtyard within the footprint of the existing power plant (see Figures 5-4 and 5-5). (The actual batteries will be place on the inside of the existing building.) Currently, only the tops of the black smokestacks and transformers are clearly visible above the slated chain link fence that exists on the perimeter of the site where no existing building wing exists. Newly installed transformers would connect the new battery storage facility

through a series of breakers and underground electrical connections to the PG&E substations located across Embarcadero West (see Figure 5-6 for the conversion configuration).

The air pollutant and GHG emissions assumptions and resulting change with the variant are described in the impacts analysis below (see 5.1.2 *Air Quality* and 5.1.8 *GHG Emissions*).

Proposed Building/Site Changes

As shown in Figure 5-1, the existing building forms a U-shape around a courtyard that faces the ballpark site. The entrance to the ballpark, the pedestrian circulation, and the adjacent large public plazas opposite the existing buildings form one of the major gateways into the new ballpark and the adjoining development. As a result, a high volume of pedestrian foot-traffic is anticipated where the southern portions of the east and west wings currently exist. These are proposed for modification as described below.

The Peaker Power Plant Variant also proposes removal of the large fuel tank that would no longer be needed (see Figure 5-4) and would replace the tank with mixed use development in a new building up to 100 feet tall. Removal of the tank is not required for the battery conversion and would only occur as part of the construction of the new mixed-use structure that becomes a proposed as part of this variant (see *New Building and Uses* below).

West Wing Modifications

Two building sections form the west wing of the Peaker Power Plant facing MLK Jr. Way. When first constructed in 1888-89, 74 MLK Jr. Way was a free-standing brick building. It was expanded shortly thereafter, in 1889-90, and the expanded section was given an address of 64 MLK, Jr. Way (Grove Street). The combined brick building was later joined to other structures on the site to form the large building seen today. These brick sections are the two oldest portions of the building. (See Figure 5-7 for the building addresses and age information.) The west wing is in fair condition, except in areas adjacent to street trees where the coating has failed; there appears to be mildew, soil and some plant growth within the brickwork; and water intrusion has affected the interior elements, causing some corrosion to the roof trusses. To accommodate a new public plaza and pedestrian circulation, this variant would reduce the length of the two-story west wing by removing four structural bays that extend a length of approximately 70 feet. Thus, this would fully remove the 1889-90 section (64 MLK Jr. Way) and retain the five and one-half bays of the oldest brick section (74 MLK Jr. Way).

The exterior appearance of the remaining building would be retained and the building would be rehabilitated in conformance with the Secretary of the Interior's Standards for the Rehabilitation of Historic Buildings (Secretary's Standards). Exterior masonry would be cleaned and recoated and the windows repaired or replaced in-kind. Some first story windows may be replaced with doors to accommodate the new uses proposed by the variant. On the interior, the full-height volume would be maintained. The steel roof trusses would be refurbished and remain visible, and the roof would be repaired, with the possible addition of skylights. The steel mezzanine structure would be retained as much as allowed by the new use, with the goal to maintain the overall industrial character of the interior of the Peaker Power Plant. The new end gable needed due to

removal of the 64 MLK Jr. Way section would be constructed in a contemporary style that is distinguishable from, but compatible with, the character of the historic structure. The new wall would provide openings into the Peaker Power Plant and opportunities for connections to possible outdoor seating for a café or retail use, as described further under *New Building and Uses* below.

East Wing Modifications

The building sections at 75 and 51 Jefferson Street from the east wing and were constructed in 1912-14 and 1928, respectively. See Figure 5-7 for the building address and age information. The east wing is in relatively good condition, showing few signs of deterioration. The façades facing Embarcadero West (north) and Jefferson Street (east) are monumental elevations and are designed to appear as one-story buildings with oversized features that do not reflect the actual multi-story height of the building (see Figure 5-3). Under the Peaker Power Plant variant, the building section identified as 75 Jefferson Street would remain in use as part of a new power generation facility; however, the building section identified as 51 Jefferson Street (southernmost portion of the east wing) would be removed to accommodate the new public plaza proposed to the south. The exterior appearance of the remaining building would be retained and rehabilitated in conformance with the Secretary's Standards. The transom windows would be repaired and refurbished and similar to the West Wing, a new end wall would be constructed so as to be distinguishable from, yet compatible with, the character of the remaining historic structure.

New Building and Uses

Mixed Use Redevelopment on Fuel Tank Site

With removal of the fuel tank, an approximately 32,000-square-foot site would be available for redevelopment, and the Project sponsor would construct a new building up to 100 feet tall. The mixed use development on the fuel tank site could include commercial or residential development, or a mix of both of these, subject to sufficient cleanup and agency approvals, and would include active uses on the ground floor as well as off-street parking necessary to serve building tenants. In particular, the fuel tank site fronts Athletics' Way and therefore street-fronting active uses would be encouraged or required (in accordance with new Project-specific zoning regulations proposed for the site, as discussed in section 3.14.2, *New Waterfront Zoning District*, in Chapter 3).⁵

As discussed above in the *Description* for this variant, maximum building heights and a range of land uses frame the maximum development that could occur across the Project (see Table 3-1 in Chapter 3), including development and uses that would occur on the Peaker Power Plant Variant. In other words, the new development accommodated on the fuel tank site would be accommodated by a redistribution result in an increase in the total square footage of uses proposed as part of the Project.

⁵ Office uses could include a range of commercial uses, such as medical office, life sciences, academic. Retail uses could include retail, cultural and/or civic uses.

West Wing and Courtyard

With conversion of the building to battery storage and removal of portions of the east and west wings, the majority of the building and the area enclosed by its wings and replaced south wall would still be used as a power plant. However, as shown conceptually in Figure 5-3, the transformed and newly available spaces created from the reduced east and west wings and south of the power plant wall -- fronting Athletics' Way, the ballpark, and the waterfront -- would have indoor and outdoor amenities for public use, including retail and dining establishments, such as a restaurant or bar, informal outdoor seating, and landscaping areas.

Agencies and Approvals

The City and Port of Oakland would review the proposed variant for design review approval, including in particular the proposed Project modifications to a local historic resource.

While the conversion of the Peaker Power Plant to battery storage would not constitute a change in land use, the proposed retail, dining and open space uses proposed immediately south and west of the power plant and the mixed use development on the site of the jet fuel tank would be a change of a land use. Parts of the Peaker Power Plant Variant site are within the area where the Project proposes a General Plan Amendment from the "General Industry and Transportation" land use classification to "Regional Commercial." The Peaker Power Plant Variant would include a General Plan Amendment to change the land use designation of the portion of the variant site east of Jefferson Street (fuel storage tank) from the Estuary Policy Plan's Retail Dining Entertainment 1 (RD&E-1) land use designation to RD&E-2, which would permit residential use.

The site is currently zoned Industrial General (IG) pursuant to the Oakland Zoning Regulations. While the conversion of the plant would not require rezoning the site, the Peaker Power Plant Variant site are within the area where the Project proposes to rezone the Project site and establish a new Waterfront Planned Development Zoning District as authorized by the proposed General Plan Amendment.

5.1.3 Study Area and Setting

The site of the Peaker Power Plant Variant is within the proposed Project site; therefore, the study area and setting applicable to this variant are the same as those for the proposed Project. Existing conditions on and around this variant site are the same as described in each environmental topic analyzed in Chapter 4 of this document.

5.1.4 Impacts of the Peaker Power Plant Variant

This section presents Peaker Power Plant Variant impacts and mitigation measures with emphasis on impacts and mitigation that are different than those identified for the proposed Project without this variant. Where impacts of the Project plus the variant are the same as those without the variant, this section provides an explanation as to why impacts of the proposed Project would remain as described in Chapter 4.

Aesthetics, Shadow and Wind

Developing the Peaker Power Plant Variant would result in the *same aesthetics, shadow and wind impacts, improvement measures, and mitigation measures* as the proposed Project.

Scenic Vista / Scenic Resource (non-CEQA)

As discussed in the *Description* above, the 100-foot building proposed under the Peaker Power Plant Variant would replace an existing approximately 45-foot-tall jet fuel take. As shown in **Figure 5-8, Visual Simulations – Variants from Project Viewpoints**, the new mixed use building with this variant would be visually prominent when viewed from Viewpoint 1 (Water Street at Clay Street) near the east edge of the Project site. The building could obstruct views of some cranes at Howard Terminal from nearby points along Embarcadero West, but would not obstruct views of the two historic vessels docked near the Oakland Ferry Terminal, nor would it obstruct views or scenic vistas of San Francisco Bay, downtown Oakland skyline or the Oakland hills from the previously selected viewpoints (shown in Figure 4.1-1 in Chapter 4).

Visual Character/Visual Quality (non-CEQA)

As also introduced above in the *Description* of this variant, the Peaker Power Plant itself is part of the PG&E Station C API,⁶ a historic resource for the purposes of CEQA (see Appendix CUL-1). Therefore, the complex of buildings is considered a historic resource, thus a visual resource for the purpose of this analysis. As discussed below in section 5.1.4, *Cultural and Tribal Cultural Resources*, despite the proposed partial demolition of the west and east wings of the buildings, the majority of the building, including its dominant architectural sections along Embarcadero West, and its oldest section along MLK Jr. Way, would remain and would be rehabilitated in conformance with the Secretary of the Interior's Standards. All work would be designed to meet the requirements of the California Historic Building Code (CHBC). Consistent with Mitigation Measure CUL-4b (Peaker Power Plant – Secretary of the Interior's Standards Compliance Analysis) identified 5.1.4 below, the variant would maintain and restore the characteristics that contribute to this building's significance as a scenic resource by virtue of being historic.

As discussed in section 5.1.4, the visibility of the buildings of the PG&E Station C API from outside the immediate site, and the open and industrial setting of the API, are character-defining features of the historical resource. Thus, development of the building up to 100 feet in height on the Peaker Power Plant Variant site immediately adjacent to the resource, in addition to development anticipated under the Downtown Oakland Specific Plan (DOSP), could result in a cumulative impact on historic architectural resources. The variant's contribution to this *historic resources* impact would be significant and unavoidable after implementation of Mitigation Measures CUL-6a and CUL-6b, introduced in 5.1.4 below.

⁶ Areas of Primary Importance (API) are City of Oakland zoning designated historic resources for the purposes of CEQA

Figure 5-8 Visual Simulations – Variants from Project Viewpoints

Because the Downtown Oakland Specific Plan (DOSP) explicitly provides for increased heights and densities immediately north of the Project site and analysis of aesthetic impacts is no longer required under CEQA for this Project, the cumulative visual impacts with anticipated DOSP developments, are not be considered a significant cumulative impact, and no mitigation measures are needed.

Further for visual character, the height of the proposed building on the storage tank portion of the variant site would not represent a meaningful difference in the context of the overall Project and would undergo design review prior to final project approvals.

Light/Glare (Non-CEQA) and Shadow

The building constructed on the site of the storage tank would cast new shadow in the same direction and times of year as the proposed Project as shown in **Figure 5-9**. Similar to the Project, the new shadow cast by the Peaker Power Plant Variant would not reach publicly accessible parks or open areas at any point in the year. In addition, historic resources that could receive shadow from the Peaker Power Plant Variant, are not particularly light-sensitive or light-dependent. Additionally, the proposed Project would not impair the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors, and thus would not have a significant impact related to building solar facilities. Moreover, increased shadow on historic resources would not substantially impair the resource's historic significance such that it would no longer be eligible for listing on a national, state, or local register of historic places. Cumulative shadow with the Peaker Power Plant Variants is shown in **Figure 5-10**, which shows that, due to the reasons discussed above, the new shadow cast by the Peaker Power Plant Variant, in combination with cumulative development, would not contribute to a significant shadow impact. Signage and lighting/glare undertaken by the variant would adhere to the same various regulations and standards considered for the proposed Project.

Wind

The 100-foot-tall building constructed on the fuel storage tank site would potentially affect wind conditions,. The wind assessment showing wind impacts from the variants, are included in **Appendix AES**. As shown in appendix figure 1D (proposed Project) compared to appendix figure 1E (proposed Project with Variants), for all locations, the average wind speed that would exceed the wind hazard criterion is expected to remain at 32 mph. Like the proposed Project, while there are exceedances, there would continue to be an overall improvement compared to existing conditions; the evaluation relies on no specific building designs are developed at this time and therefore remains conservative. The Project with the Peaker Power Plant Variant would also have fewer total wind hazard criterion exceedances (42/177) as compared to the Project at full buildout (52/77). Mitigation requiring project-specific analysis will continue to apply. No new or changed impacts or mitigation measures would be required for aesthetics (light/glare, shadow, wind).

Figure 5-9, Shadow Diagram – Existing and Project with the Peaker Power Plant Variant

Figure 5-10, Shadow Diagram – Existing, Project with the Peaker Power Plant Variant, and Cumulative

Air Quality

Construction and operation of the Peaker Power Plant variant will result in *slightly different emissions* than the Project. Additional construction activity associated with physical changes to the buildings would occur. At the same time, reduced criteria pollutant emissions would occur due to shutdown of existing fossil-fueled power generation. The same mitigation measures would apply.

Construction Impacts

Construction emissions were estimated for activities associated with the power plant building renovation and conversion from jet fuel turbines to battery storage, as well as construction of the new mixed use building on the tank site. Construction associated with the Peaker Power Plant building renovation would occur from 2022 to 2023 and involve additional off-road construction equipment activity and on-road construction worker and truck trips. Construction associated with the additional mixed-use building at the Peaker Power Plant tank site would occur in 2021 and involve additional off-road construction equipment activity and on-road construction worker and truck trips. All other construction activities associated with ballpark and non-ballpark building construction would remain the same as the Project. Details of the construction assumptions are presented in **Appendix AIR**.

Because construction for the Peaker Power Plant variant includes construction of the full Project plus additional construction associated with power plant building renovation and conversion, and mixed-use development on the tank site, unmitigated construction emissions of ROG, NO_x, and PM₁₀ emissions would exceed thresholds in multiple years, similar to the Project. As such, the same mitigation measures as required for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measures AIR-1a (Dust Controls), AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), and AIR-1d (Low-VOC Architectural Coatings during Construction).

Table 5-1 presents average daily mitigated construction-related criteria pollutant emissions under the Peaker Power Plant variant with implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and AIR-1d (Low-VOC Architectural Coatings during Construction). As shown in Table 5-1, the combined average daily Peaker Power Plant Variant emissions, which includes the full Project, with implementation of Mitigation Measure AIR-1c and AIR-1d would exceed the City's significance threshold in 2021 for NO_x with maximum average daily emissions of 80.5 lbs/day. This exceedance is slightly greater than the Project, and would *remain significant and unavoidable with mitigation*, as identified for the Project without this variant.

TABLE 5-1
AVERAGE DAILY MITIGATED CONSTRUCTION EMISSIONS BY YEAR PEAKER POWER PLANT VARIANT
(PROJECT + PEAKER POWER PLANT)

Year	Average Daily Emissions (lbs/day) ^{a,b}			
	ROG	NOX	PM10 (exhaust) ^c	PM2.5 (exhaust) ^c
Significance Threshold	54	54	82	54
2020	1.7	14.4	0.5	0.5

2021	8.6	80.5	1.5	1.4
2022	27.8	38.9	0.7	0.7
2023	23.7	20.5	0.4	0.4
2024	3.5	42.1	0.6	0.5
2025	25.8	31.7	0.5	0.4
2026	45.2	36.3	0.6	0.5
2027	45.0	38.5	0.5	0.5

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter that is 10 microns or less in diameter; PM_{2.5} = particulate matter that is 2.5 microns or less in diameter;

^a **Bold values** = threshold exceedance

^b Mitigation Measures modeled in this table include Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), modeled as Tier 4 engines on all off-road equipment (as available), and Mitigation Measure AIR-1d (Low-VOC Architectural Coatings during Construction), modeled as low-VOC coatings with 10 grams VOC per liter for all interior coatings. This table also includes construction activities associated with construction of the pedestrian and bicycle overcrossing as well as other off-site transportation improvements, which are required as mitigations in the Transportation section.

^c Only exhaust emissions of PM₁₀ and PM_{2.5} emissions are shown, because fugitive dust emissions are addressed through best management practices as required Mitigation Measure AIR-1a (Dust Controls).

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020.

Operational Impacts, and Combined Construction and Operational Impacts

Since all of the square footage of the Project is being preserved in the Peaker Power Plant variant, the land uses, activities, attendance and population data are identical to the Project. Additionally, mobile trips associated with hauling, vendor deliveries, and workers would also remain the same. Therefore, operational emissions associated with these activities are expected to be the same as the Project operational emissions, since the overall population and activities will be identical.

However, the Peaker Power Plant variant is expected to have significant reductions in operational criteria pollutant emissions. At present, the facility uses jet fuel combustion in order to generate electricity. Under the Peaker Power Plant Variant, jet fuel consumption at the site would cease, and criteria pollutant emissions associated with fuel combustion for electricity generation would no longer occur. The direct avoided emissions were calculated based on the average annual Peaker Power Plant electricity generation and fuel consumption for 2010 to 2018. Emission reductions were calculated for three sources which would be removed: jet fuel combustion for power generation (gas turbines), fuel combustion for an emergency diesel generator, and solvent evaporation for wipe cleaning. Additionally, the Peaker Power Plant Variant fuel tank parcel would be developed with a mixed-use building and an associated emergency generator, which were added to the emissions inventory. Detailed emission calculations are included in Appendix AIR.

During full buildout operations, the Peaker Power Plant variant would result in direct mitigated reductions in ROG of 2.4 pounds per day and 0.4 tons per year, reductions in NO_x of 44.3 pounds per day and 8.1 tons per year, and reductions in PM₁₀ and PM_{2.5} of 3.9 pounds per day and 0.7 tons per year each. When compared to Project full buildout operations in 2027, this represents a 1 percent reduction in ROG, a 22 percent reduction in NO_x, a 3 percent reduction in PM₁₀, and an 11 percent reduction in PM_{2.5}. Phase I operational emissions would be reduced by an even greater

percentage, because the proportion of emission reductions from the Peaker Power Plant Variant is greater during Phase 1 partial operations; these reductions are 3 percent in ROG, 52 percent in NO_x, 6 percent in PM₁₀, and 27 percent in PM_{2.5}.

Table 5-2 summarizes total net new annual and average daily unmitigated emissions by year from 2023 through 2028 under the Peaker Power Plant variant, and compares variant emissions with the City of Oakland significance thresholds. Similar to the Project, partial buildout operational emissions of ROG, NO_x, and PM₁₀ would exceed the significance thresholds in 2027 and full buildout operational emissions of ROG, NO_x, and PM₁₀ would exceed the significance thresholds in 2028. As such, the same mitigation measures as for the Project would be required for the Peaker Power Plant variant. These include Mitigation Measures AIR-2a (Use Low and Super-compliant VOC Architectural Coatings in Maintaining Buildings through Covenants, Conditions, and Restrictions), AIR-2b (Promote use of Green Consumer Products), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), and AIR-2e (Criteria Pollutant Mitigation Plan).

Table 5-3 below presents net new average daily and total annual combined mitigated construction and mitigated operational emissions under the Peaker Power Plant Variant during the years when construction and operations overlap. This table presents overlapping construction emissions with Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and with Mitigation Measure AIR-1d (Low-VOC Architectural Coatings during Construction). As shown in Table 5-3, net new Project emissions would still remain above the significance thresholds despite implementation of mitigation measures AIR-2a, AIR-2b, AIR-2d, and AIR-2e. However, under the Peaker Power Plant Variant, emissions of NO_x would be dramatically reduced; emissions would only exceed the significance thresholds in 2027 and 2028, unlike the Project when the NO_x thresholds are exceeded from 2024-2028. Similar to the Project, emissions of ROG would exceed the significance thresholds in all years from 2025 through 2028, emissions of PM₁₀ would exceed the significance thresholds in 2027 and 2028, and emissions of PM_{2.5} would not exceed the significance thresholds in any year. These exceedances are less than the Project due to the reduction in operational emissions, however, this impact would **remain significant and unavoidable with mitigation**, as identified for the Project without this variant.

TABLE 5-2
TOTAL UNMITIGATED ANNUAL AND AVERAGE DAILY OPERATIONAL EMISSIONS BY YEAR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT)

Year	Average Daily Emissions (lbs/day) ^{a,b}				Total Annual Emissions (tons/year) ^{a,b}			
	ROG	NOX	PM10	PM2.5	ROG	NOX	PM10	PM2.5
Significance Threshold	54	54	82	54	10	10	15	10
A's Related Existing Conditions (2018) ^c	32.9	19.0	20.6	4.7	6.0	3.5	3.8	0.9
2023								
Phase 1 Operational Emissions ^{d,e}	41.7	-9.9	30.5	4.6	7.6	-1.8	5.6	0.8
Net New Emissions ^f	8.9	-28.9	9.9	-0.1	1.6	-5.3	1.8	0.0
2024 – 2026 ^g								

Phase 1 Operational Emissions ^{d,e}	77.8	34.2	56.7	10.8	14.2	6.2	10.3	2.0
<i>Net New Emissions^f</i>	<i>45.0</i>	<i>15.2</i>	<i>36.1</i>	<i>6.1</i>	<i>8.2</i>	<i>2.8</i>	<i>6.6</i>	<i>1.1</i>
2027								
Full Buildout Operational Emissions ^{d,e}	117.7	80.2	85.0	17.9	21.5	14.6	15.5	3.3
<i>Net New Emissions[†]</i>	<i>84.9</i>	<i>61.2</i>	<i>64.4</i>	<i>13.2</i>	<i>15.5</i>	<i>11.2</i>	<i>11.7</i>	<i>2.4</i>
2028								
Full Buildout Operational Emissions ^{e,h}	198.5	173.4	142.3	32.4	36.2	31.6	26.0	5.9
<i>Net New Emissions^f</i>	<i>165.7</i>	<i>154.4</i>	<i>121.7</i>	<i>27.7</i>	<i>30.2</i>	<i>28.2</i>	<i>22.2</i>	<i>5.0</i>
Maximum Net New Operational Emissions	165.7	154.4	121.7	27.7	30.2	28.2	22.2	5.0

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter that is 10 microns or less in diameter; PM_{2.5} = particulate matter that is 2.5 microns or less in diameter;

^a **Bold values** = threshold exceedance for net new emissions

^b Due to rounding, emissions from individual sectors may not add up to total.

^c Emissions for A's related existing conditions are presented in Table 4.2-8. These emissions only represent emissions associated with A's operations and ballgames that would be relocated to the new ballpark. Only emissions for A's related existing conditions were subtracted from Project emissions to determine net new emissions associated with the Project.

^d Operational emissions are scaled for partial years of operation in 2023 and 2027 based on the number of days of full operations for those years compared to 365 total days per year (30 days for the Project and 305 days for the Peaker Power Plant Variant in 2023 and 120 days for the Project in 2027). For 2023, ballpark emissions are not scaled as the ballpark is operational at the start of Phase 1.

^e Only Phase 1 non-ballpark land use emissions are scaled by the ratio of 30 days to 365 days.

Mobile source emissions include the 20% trip reduction required by AB 734 and implementation of on- and off-site transportation improvements and mitigation measures included in the Transportation section. For emissions without the 20% trip reduction, refer to

^f Appendix AIR, Air Quality Supporting Information.

^g Net new emissions represent Project and Variant operational emissions *minus* existing A's-related emissions.

^h Operational emissions are anticipated to be the same during 2024-2026 when Phase 1 is operational and before full Project buildout occurs. 2028 is the first full year (365 days) of full Project buildout operations and associated emissions.

SOURCE: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020

TABLE 5-3
TOTAL ANNUAL AND AVERAGE DAILY COMBINED MITIGATED CONSTRUCTION AND
MITIGATED OPERATIONAL EMISSIONS BY YEAR FOR THE PEAKER POWER PLANT VARIANT (PROJECT +
PEAKER POWER PLANT)

Year	Average Daily Emissions (lbs/day) ^{a,b}				Total Annual Emissions (tons/year) ^{a,b}			
	ROG	NOX	PM10	PM2.5	ROG	NOX	PM10	PM2.5
Significance Threshold	54	54	82	54	10	10	15	10
A's Related Existing Conditions ^c	32.9	19.0	20.6	4.7	6.0	3.5	3.8	0.9
2023								
Construction ^d	23.7	20.5	0.4	0.4	3.1	2.8	0.05	0.05
Phase 1 Operations ^{e,f}	40.8	-13.1	30.4	4.5	7.4	-2.4	5.6	0.8
<i>Net New Emissions^g</i>	<i>31.6</i>	<i>-11.6</i>	<i>10.2</i>	<i>0.1</i>	<i>4.6</i>	<i>-3.1</i>	<i>1.8</i>	<i>0.0</i>
2024								
Construction ^d	3.5	42.1	0.6	0.5	0.5	5.5	0.07	0.07
Phase 1 Operations ^e	75.8	26.9	56.4	10.5	13.8	4.9	10.3	1.9
<i>Net New Emissions^g</i>	<i>46.5</i>	<i>50.1</i>	<i>36.4</i>	<i>6.4</i>	<i>8.3</i>	<i>6.9</i>	<i>6.6</i>	<i>1.1</i>
2025								
Construction ^d	25.8	31.7	0.5	0.4	3.4	4.1	0.06	0.05
Phase 1 Operations ^e	75.8	26.9	56.4	10.5	13.8	4.9	10.3	1.9
<i>Net New Emissions^g</i>	<i>68.8</i>	<i>39.6</i>	<i>36.2</i>	<i>6.2</i>	<i>11.2</i>	<i>5.6</i>	<i>6.6</i>	<i>1.1</i>
2026								
Construction ^d	45.2	36.3	0.6	0.5	5.9	4.7	0.07	0.07
Phase 1 Operations ^e	75.8	26.9	56.4	10.5	13.8	4.9	10.3	1.9
<i>Net New Emissions^g</i>	<i>88.2</i>	<i>44.2</i>	<i>36.4</i>	<i>6.3</i>	<i>13.7</i>	<i>6.2</i>	<i>6.6</i>	<i>1.1</i>
2027								
Construction ^d	45.0	38.5	0.5	0.5	3.9	3.4	0.05	0.05
Full Buildout Operations ^{e,f}	114.7	69.1	84.6	17.5	20.9	12.6	15.4	3.2
<i>Net New Emissions^g</i>	<i>126.8</i>	<i>88.6</i>	<i>64.5</i>	<i>13.3</i>	<i>18.8</i>	<i>12.5</i>	<i>11.7</i>	<i>2.4</i>
2028								
Construction ^d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full Buildout Operations ^{e,h}	193.4	154.5	141.6	31.7	35.3	28.2	25.8	5.8
<i>Net New Emissions^g</i>	<i>160.5</i>	<i>135.5</i>	<i>121.0</i>	<i>27.0</i>	<i>29.3</i>	<i>24.7</i>	<i>22.1</i>	<i>4.9</i>
Maximum Net New Operational Emissions	160.5	135.5	121.0	27.0	29.3	24.7	22.1	4.9

TABLE 5-3 (CONTINUED)
TOTAL ANNUAL AND AVERAGE DAILY COMBINED MITIGATED CONSTRUCTION AND
MITIGATED OPERATIONAL EMISSIONS BY YEAR FOR THE PEAKER POWER PLANT VARIANT (PROJECT +
+PEAKER POWER PLANT)

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter that is 10 microns or less in diameter; PM_{2.5} = particulate matter that is 2.5 microns or less in diameter;

- ^a **Bold values** = threshold exceedance for net new emissions
- ^b Due to rounding, emissions from individual sectors may not add up to total.
- ^c Existing A's related emissions are presented in Table 4.2-8.
- ^d Average daily construction emissions represent total annual emissions divided by 260 work days per year (with the exception of the ballpark construction emissions, which are divided by 312 work days per year to account for weekend work). Emissions include implementation of Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), and Mitigation Measure AIR-1d (Low-VOC Architectural Coatings during Construction). This table also includes construction activities associated with construction of the pedestrian and bicycle overcrossing as well as other off-site transportation improvements, which are required as mitigations in the Transportation section.
- ^e Average daily operational emissions represent total annual emissions divided by 365 days per year. Emissions include the 20% trip reduction required by AB 734, implementation of on- and off-site transportation improvements and mitigation measures included in the Transportation section, Mitigation Measure AIR-2a (Use Low and Super-compliant VOC Architectural Coatings in Maintaining Buildings through Covenants, Conditions, and Restrictions), and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications).
- ^f Operational emissions are scaled for partial years of operation in 2023 and 2027 based on the number of days of full operations for those years compared to 365 total days per year (30 days for the Project and 305 days for the Peaker Power Plant Variant in 2023 and 120 days for the Project in 2027). For 2023, ballpark emissions are not scaled as the ballpark is operational at the start of Phase 1. Only Phase 1 non-ballpark land use emissions are scaled by the ratio of 30 days to 365 days.
- ^g Net new emissions represent Project and Variant construction *plus* Project and Variant operational emissions *minus* existing A's-related emissions.
- ^h 2028 is the first full year (365 days) of full Project buildout operations and associated emissions.

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020

Carbon Monoxide

The Peaker Power Plant variant would not change mobile source emissions compared to the Project because the land uses, activities, attendance and population data are the same as the Project. Therefore, the impacts and analysis for the Peaker Power Plant variant associated with carbon monoxide would be the same as those discussed above for the Project. As such, development under the Peaker Power Plant variant would not be required to estimate localized CO concentrations as it would not contribute to CO concentrations exceeding CAAQS. The impact would ***be less than significant and no mitigation measures are required***, same as identified for the proposed Project without this variant.

Toxic Air Contaminants

The Peaker Power Plant variant would result in reduced TAC emissions associated with the shutdown of existing fossil fueled power generation. This would also result in reduced health risks at both the onsite and offsite Maximally Exposed Individual Receptor (MEIR).

Health risks associated with TAC emissions from construction activities for the conversion of the Peaker Power Plant and other construction activities with the Variant were modeled using the same methods as described for the Project in section 4.2 *Air Quality*, with a few exceptions including: no nighttime construction was modeled; construction area sources were input into AERMOD to represent the new construction areas; and the exposure assessment only includes offsite receptors because construction would occur from 2021-2023 before any new onsite receptors are present. Additionally, point sources were used for the Variant generators. Generators were assumed to be on the roof for the Peaker Power Plant fuel tank parcel mixed-use

building. All other source parameters are consistent with those used for the Project generators. Because the fuel tank parcel would be an additional on-site building, building downwash was remodeled for all Project generators to account for any potential downwash effects from the new parcel.

For operational TACs, because existing operations at the Peaker Power Plant were modeled by BAAQMD in the West Oakland Community Action Plan (WOCAP) (under the name Dynegy), operational health risks were taken directly from data supplied by the BAAQMD using the methods described in section 4.2 *Air Quality*. Therefore, this analysis did not remodel TAC emissions, perform dispersion modeling, or calculate health risks from the Peaker Power Plant. Refer to section 4.2 *Air Quality*, Table 4.2-25 (for the existing offsite MEIR) and Table 4.2-27 (for the new onsite MEIR) for estimated health risks associated with TACs from the Peaker Power Plant.

Impacts on Existing Sensitive Receptors

Because construction for the Peaker Power Plant variant includes construction of the full Project, plus additional construction associated with power plant building modifications and conversion and development of a mixed-use building on the tank site, and because construction TACs drive health risks at the offsite MEIR, unmitigated cancer risk and annual average PM_{2.5} concentrations would exceed the health risk thresholds, similar to the Project. As such, the same mitigation measures required for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), and AIR-4d (Truck-Related Risk Reduction Measures – Toxic Air Contaminants).

Table 5-4 shows the mitigated HRA results for existing offsite receptors for Scenario 1 exposure from construction and operational activities for the Peaker Power Plant variant taking into account the implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and AIR-2c (Diesel Backup Generator Specifications). Similar to the Project, when accounting for mitigation measures, both cancer risk and annual average PM_{2.5} concentrations associated with the Peaker Power Plant variant would be reduced below the significance thresholds. While exceedances would be slightly greater than with the Project due to additional construction activity, this impact would ***remain less than significant with mitigation***, same as identified for the proposed Project without this variant.

TABLE 5-4
MITIGATED EXCESS LIFETIME CANCER RISK, CHRONIC HAZARD INDEX, AND ANNUAL AVERAGE PM_{2.5}
CONCENTRATION OF THE PEAKER POWER PLANT VARIANT AT THE EXISTING OFFSITE MEIR

Emissions Source / Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Chronic Hazard Index ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	10.0	1.0	0.3
Scenario 1: Construction Plus Operations			
Existing Howard Terminal ^d	-2.2	-0.000081	-0.00064
Peaker Power Plant Construction	0.0057	--	--
Peaker Power Plant Operations	0.0036	5.0E-07	2.5E-06
Project Contribution	8.3	0.0039	0.19
Total Mitigated Project + Peaker Power Plant	8.3	0.0039	0.19
Total Mitigated Net New Project + Peaker Power Plant ^e	6.1	0.0038	0.19
UTM – X	563080	563180	563180
UTM – Y	4183660	4183920	4183920
Year of Exposure ^f	n/a	2027	2027

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator; -- = no value reported.

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR 1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also assumes the 20% trip reduction requirement of AB 734 is met and includes construction activities associated with implementation of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR 1a. For operations, PM_{2.5} concentrations include exhaust only, tire wear, brake wear, and road dust. PM_{2.5} concentrations at off-site receptors in Scenario 1 include contributions from multiple phases of Project construction and subsequent Project operations since 2027 includes construction and operation.

^d Existing Howard Terminal operations include truck activity at the project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the TAC emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing offsite receptors to these TAC emissions would also be removed.

^e Total mitigated net new Project + Peaker Power Plant represents total Project + Peaker Power Plant health risks *minus* existing condition health risks from Howard Terminal truck activity.

^f For cancer risk, the exposure is total lifetime 30-year exposure; for non-cancer chronic HI and PM_{2.5} concentrations, this represents the year when the maximum value occurs at the MEIR.

SOURCES: Appendix AIR, *Air Quality Supporting Information*.

Impacts on New Sensitive Receptors

Because operational generator TACs for the Peaker Power Plant variant would be greater than the Project due to the additional emergency generator associated with the Variant's operation, and because operational generator TACs drive health risks at the new onsite MEIR (relative to construction), unmitigated cancer risk and annual average PM_{2.5} concentrations would exceed the health risk thresholds, similar to the Project. In addition, because construction for the Peaker Power Plant variant is the same as the Project, plus additional construction associated with building renovation and conversion, unmitigated cancer risk and annual average PM_{2.5} concentrations would exceed the health risk thresholds, similar to the Project. As such, the same mitigation measures as for the Project would be required for the Peaker Power Plant variant.

These include Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-4a (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), and AIR-5a (Install MERV16 Filtration Systems).

Table 5-5 shows the mitigated HRA results for new onsite receptors for Scenario 2 exposure from construction and operational activities for the Peaker Power Plant Variant taking into account the implementation of Mitigation Measures AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), and AIR-5a (Install MERV16 Filtration Systems). Same as the Project, Mitigation Measure AIR-5a was assumed to reduce cancer risk, chronic HI, and PM_{2.5} concentrations by approximately 76 percent. Similar to the Project, when accounting for mitigation measures, both cancer risk and annual average PM_{2.5} concentrations associated with the Peaker Power Plant variant would be reduced below the significance thresholds.

TABLE 5-5
MITIGATED EXCESS LIFETIME CANCER RISK, CHRONIC HAZARD INDEX, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION OF THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) AT THE NEW ONSITE MEIR

Scenario / Emissions Source / Location / Year	Excess Lifetime Cancer Risk (per million) ^{a,b}	Chronic Hazard Index ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	10.0	1.0	0.3
Scenario 2: Construction Plus Operations			
Peaker Power Plant Construction ^d	--	--	--
Peaker Power Plant Operations	3.1	2.3E-07	1.1E-06
Project Contribution	1.7	0.0021	0.024
Total Mitigated Project + Peaker Power Plant	4.8	0.0021	0.024
MEIR Location (UTM – X)	563420	563020	563020
MEIR Location (UTM – Y)	4183440	4183640	4183640
Year of Maximum Exposure ^e	n/a	2027	2027

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = Universal Transverse Mercator; -- = no value reported.

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), Mitigation Measure AIR-2c (Diesel Backup Generator Specifications), and Mitigation Measure AIR-5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction requirement of AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a (Dust Controls). For operations, PM_{2.5} concentrations include exhaust, tire wear, brake wear, and road dust. PM_{2.5} concentrations at on-site receptors in Scenario 2 include contributions from multiple phases of Project construction and subsequent Project operations since 2027 includes construction and operation.

^d Values for Peaker Power Plant construction are not shown because construction activities occur from 2021-2023, before any new onsite receptors are present at the Project site.

^e For cancer risk, the exposure is total excess lifetime 30-year exposure; for non-cancer chronic HI and PM_{2.5} concentrations, this represents the year when the maximum value occurs at the MEIR.

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020.

Therefore, similar to the Project, when accounting for mitigation measures, both cancer risk and annual average PM_{2.5} concentrations associated with the Peaker Power Plant Variant would be reduced below the significance thresholds. These health risk values are slightly greater than the Project due to increased operational TAC emissions from the new emergency generator. Please refer to section 4.2 *Air Quality*, Table 4.2-15 for estimated health risks associated with TACs from the Project at the existing offsite MEIR. Overall, this impact would be greater than the Project but would ***remain less than significant with mitigation***, same as identified for the Project without this variant.

Odors

The Peaker Power Plant variant would not change odor sources compared to the Project, because the land uses, activities, attendance and population data are generally the same as the Project. In addition, the Peaker Power Plant variant would site the same number of residential users in the same locations as the Project, with the exception of new residential users located in the Peaker Power Plant fuel tank parcel mixed-use building, and all new residential development under the Peaker Power Plant variant will occur well within the recommended odor buffer of numerous existing sources. Therefore, the impacts and analysis for the Peaker Power Plant variant associated with odors would be the ***same as the Project without this variant – less than significant***.

Cumulative Regional Criteria Pollutant Emissions

As discussed above, construction and operational emissions associated with the Peaker Power Plant Variant would be similar to the Project since the variant includes the full Project, though lower because of the additional construction activity and reduced operational emissions from the shutdown of the jet-fueled power generation. As such, criteria pollutant emissions for the Peaker Power Plant Variant would be similar to the Project and the ***same mitigation measures would be required***. As is the case for the Project without this variant, the Peaker Power Plant Variant's emissions of criteria air pollutants would be cumulatively considerable, (since the variant includes the full Project), and this cumulative impact would be **significant and unavoidable with mitigation**. No new or changed impacts or mitigation measures would be required.

Cumulative Regional Health Risks

As discussed above, health risks associated with the Peaker Power Plant variant would be very similar to the Project since the variant includes the full Project, though slightly different because of the additional construction activity, increased generator emissions, and reduced operational emissions associated with the power plant decommissioning. As discussed in section 4.2 *Air Quality*, background risk values for the Peaker Power Plant Variant were determined using two independent methods: (1) the standard BAAQMD CEQA Guidelines approach using the 1,000-foot radius and risk values from the BAAQMD's online screening tools; and (2) specific health risks for all major TAC sources in West Oakland included in the BAAQMD's health risk modeling for the WOCAP. The tables below present the results of both methods.

Impacts on Existing Off-site Sensitive Receptors

Table 5-6 summarizes the HRA results for the existing off-site MEIR under mitigated conditions along with the cumulative background health risks using the standard BAAQMD approach.

Table 5-7 summarizes the HRA results for the existing off-site MEIR under mitigated conditions along with the cumulative background health risks using the detailed WOCAP modeling approach. Similar to the Project, total cumulative cancer risk and annual average PM_{2.5} concentrations, with the contribution from the Peaker Power Plant Variant, would exceed the significance thresholds (non-cancer chronic risk would not exceed the thresholds). As such, the same mitigation measures for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), AIR-2e (Criteria Pollutant Mitigation Plan), AIR-4 (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), AIR-5a (Install MERV16 Filtration Systems), AIR-5b (Exposure to Air Pollution – Toxic Air Contaminants), and AIR-2.CU (Implement Applicable Strategies from the West Oakland Community Action Plan).

**TABLE 5-6
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE EXISTING OFF-SITE MEIR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) USING THE STANDARD BAAQMD APPROACH**

Emissions Source/ Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Non-Cancer Chronic Hazard Index (unitless) ^a	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	100	10	0.8
Project Contributions – Mitigated			
Existing Howard Terminal ^d	-2.2	-0.000081	-0.00064
Peaker Power Plant Construction ^e	0.057	--	--
Peaker Power Plant Operations	0.0036	5.0E-07	2.52E-06
Project Contribution	8.3	0.0039	0.19
Total Mitigated Project + Peaker Power Plant	8.3	0.0039	0.19
Total Mitigated Net New Project + Peaker Power Plant ^f	6.1	0.0038	0.19
MEIR Location (UTM – X)	563080	563180	563180
MEIR Location (UTM – Y)	4183660	4183920	4183920
Existing Stationary Sources ^g	0.93	0.0023	0.076
Roadways ^h	0	--	0.11
Highways ⁱ	19	--	0.56
Major Streets ^j	4.1	--	0.060
Railways ⁱ	67	--	0.017
<i>Total Cumulative</i>	<i>91</i>	<i>0.0023</i>	<i>0.82</i>

TABLE 5-6 (CONTINUED)
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE EXISTING OFF-SITE MEIR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) USING THE STANDARD BAAQMD APPROACH

Emissions Source/ Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Non-Cancer Chronic Hazard Index (unitless) ^a	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Project Plus Cumulative			
Mitigated Net New Project + Peaker Power Plant	6.1	0.0038	0.19
Cumulative Contributions	91	0.0023	0.82
<i>Cumulative Total</i>	<i>97.1</i>	<i>0.0061</i>	<i>1.0</i>

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator; -- = no risk was calculated or data was missing

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also includes the 20% trip reduction requirement of AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, PM_{2.5} concentrations include exhaust only, tire wear, brake wear, and road dust.

^d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the TAC emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.

^e Construction of the Peaker Power Plant Variant occurs during Phase 1 of the project, before any residents move in, and so variant construction only impacts off-site receptors.

^f Total mitigated net new Project + Peaker Power Plant represents total mitigated Project + Peaker Power Plant health risks *minus* health risks from existing Howard Terminal truck activity.

^g Existing stationary sources includes all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.

^h Roadways include nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 feet of the off-site cancer or on-site cancer and PM_{2.5} MEIRs.

ⁱ Includes nearby major streets, highway, and railways. Cancer and PM_{2.5} impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.

^j Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

TABLE 5-7
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE EXISTING OFF-SITE MEIR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) USING THE WOCAP APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	100	0.8
Project Contributions – Mitigated		
Existing Howard Terminal ^d	-2.2	-6.4E-04
Peaker Power Plant Construction ^e	0.057	--
Peaker Power Plant Operations	0.0036	2.5E-06
Project Contribution	8.3	0.19
Total Mitigated Project + Peaker Power Plant	8.3	0.19

TABLE 5-7 (CONTINUED)
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE EXISTING OFF-SITE MEIR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) USING THE WOCAP APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Total Mitigated Net New Project + Peaker Power Plant ^f	6.1	0.19
MEIR Location (UTM – X)	563080	563180
MEIR Location (UTM – Y)	4183660	4183920
Cumulative Contributions – Year 2024		
Highway ^g	4.0	0.38
Other ^h	14.0	0.01
Permitted ⁱ	2.2	0.15
Dynegy ^j	0.01	0.001
Schnitzer ^k	25.6	0.16
Port ^l	127.7	0.20
Rail ^m	148.2	0.05
Street ⁿ	4.0	1.99
<i>Total Cumulative</i>	325.6	2.95
Project Plus Cumulative		
Mitigated Project + Peaker Power Plant Total	6.1	0.19
Cumulative Contributions	325.6	2.95
<i>Cumulative Total</i>	331.8	3.14

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator.

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also includes the 20% trip reduction required by AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, PM_{2.5} concentrations include exhaust only, tire wear, brake wear, and road dust.

^d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the TAC emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.

^e Construction of the Peaker Power Plant Variant occurs during Phase 1 of the project, before any residents move in, and so variant construction only impacts off-site receptors.

^f Total mitigated net new Project + Peaker Power Plant represents total mitigated Project + Peaker Power Plant health risks *minus* health risks from Existing Howard Terminal activity.

^g Highway includes exhaust and fugitive dust emissions from vehicles and trucks driving on highways.

^h Other includes ferries and truck-related businesses.

ⁱ Permitted includes all BAAQMD-permitted stationary sources in West Oakland except the Port of Oakland and Schnitzer Steel, such as Custom Alloy Scrap Sales, East Bay Municipal Utility District, and backup emergency generators.

^j Dynegy includes TAC emissions from the Dynegy Peaker Power Plant, a BAAQMD-permitted source.

^k Schnitzer includes TAC emissions sources associated with the Schnitzer Steel facility, including permitted stationary sources, ocean-going vessels and trucks.

^l Port includes TAC emissions sources associated with the Port of Oakland, including permitted stationary sources, ocean-going vessels, harbor craft, dredging, cargo handling equipment, the BNSF railyard, and trucks.

^m Rail includes the UP railyard and both freight and passenger locomotives operating on the various rail lines in the area.

ⁿ Street includes exhaust and fugitive dust emissions from vehicles and trucks driving on local roadways.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

As presented above in Table 5-7, the total cumulative mitigated cancer risk for the existing off-site MEIR would be 331.8 per million, which would exceed the cumulative significance threshold of 100 per million. Also, as presented above in Table 5-7, the total mitigated annual average PM_{2.5} concentrations for the existing off-site MEIR would be 3.14 µg/m³, which would exceed the cumulative significance threshold of 0.8 µg/m³. Non-cancer chronic risk would not exceed the thresholds for the existing off-site MEIRs, as presented in Table 5-6. Therefore, same as the Project without this variant, the Peaker Power Plant Variant's cumulative cancer risk and PM_{2.5} concentration impact at existing off-site receptors would be cumulatively considerable. These exceedances are slightly greater than the Project; , this impact would ***remain significant and unavoidable with mitigation***, same as identified for the Project without this variant. Overall, no new or changed impacts or mitigation measures would be required.

Impacts on New Sensitive Receptors

Table 5-8 summarizes the HRA results for the new on-site MEIR under mitigated conditions along with the cumulative background health risks using the standard BAAQMD approach.

Table 5-9 summarizes the HRA results for the new on-site MEIR under mitigated conditions along with the cumulative background health risks using the detailed WOCAP modeling approach. Similar to the Project, total cumulative cancer risk and annual average PM_{2.5} concentrations with the contribution from the Peaker Power Plant Variant would exceed the significance thresholds (non-cancer chronic risk would not exceed the thresholds). As such, the same mitigation measures for the Project would be required for the Peaker Power Plant Variant. These include Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), AIR-2e (Criteria Pollutant Mitigation Plan), AIR-4 (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), AIR-5a (Install MERV16 Filtration Systems), AIR-5b (Exposure to Air Pollution – Toxic Air Contaminants), and AIR-2.CU (Implement Applicable Strategies from the West Oakland Community Action Plan).

As presented below in **Table 5-9**, the total cumulative mitigated cancer risk for the new on-site MEIR would be 271.7 per million, which would exceed the cumulative significance threshold of 100 per million. Also, as presented above in **Table 5-9**, the total mitigated annual average PM_{2.5} concentrations for the existing on-site MEIR would be 2.4 µg/m³, which would exceed the cumulative significance threshold of 0.8 µg/m³. Non-cancer chronic risk would not exceed the thresholds for the existing on-site MEIRs, as presented in Table 5-8. Therefore, same as the Project without this variant, the Peaker Power Plant Variant's cumulative cancer risk and PM_{2.5} concentration impact at new on-site receptors would be cumulatively considerable. These exceedances are slightly less than the Project; this is because the MEIR for the Peaker Power Plant is at a different location from the MEIR for the Project (the Peaker Power Plant MEIR is located at Block 18 and the Project MEIR is located at Block 6), and the background health risk values are lower at the Peaker Power Plant MEIR than the Project MEIR (see Table 5-5 above and Table 4.2-15 for the Project MEIR values). However, this impact would ***remain significant and unavoidable with mitigation***, same as identified for the Project without this variant. Overall, no new or changed impacts or mitigation measures would be required.

TABLE 5-8
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE NEW ON-SITE MEIR FOR THE PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) USING THE STANDARD BAAQMD APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Non-Cancer Chronic Hazard Index (unitless) ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	100	10.0	0.8
Project Contributions – Mitigated			
Peaker Power Plant Construction ^d	--	--	--
Peaker Power Plant Operations	3.1	2.3E-07	1.1E-06
Project Contribution	1.7	0.002	0.02
Total Mitigated Project + Peaker Power Plant	4.8	0.002	0.02
MEIR Location (UTM – X)	563420	563020	563020
MEIR Location (UTM – Y)	4183440	4183640	4183640
Cumulative Contributions			
Existing Stationary Sources ^e	0.9	0.0055	0.60
Roadways ^f	0	--	0
Highways ^g	4.0	--	0.27
Major Streets ^{g,h}	4.4	--	0.03
Railways ^g	89.8	--	0.08
<i>Cumulative Total</i>	99.2	0.0055	0.99
Project Plus Cumulative			
Mitigated Project + Peaker Power Plant Total	4.8	0.002	0.02
Cumulative Contributions	99.2	0.0055	0.99
<i>Cumulative Total</i>	104.0	0.008	1.01

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator; -- = no risk was calculated or data was missing

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), Mitigation Measure AIR-2c (Diesel Backup Generator Specifications), and Mitigation Measure AIR 5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction required by AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, PM_{2.5} concentrations include exhaust only, tire wear, brake wear, and road dust.

^d Construction of the Peaker Power Plant Variant occurs during Phase 1 of the project, before any residents move in, and so variant construction only impacts off-site receptors.

^e Existing stationary sources includes all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.

^f Roadways include nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 feet of the on-site cancer or on-site cancer and PM_{2.5} MEIRs.

^g Includes nearby major streets, highway, and railways. Cancer and PM_{2.5} impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.

^h Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

TABLE 5-9
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL

**AVERAGE PM_{2.5} CONCENTRATION AT THE NEW ON-SITE MEIR FOR THE PEAKER POWER PLANT VARIANT
(PROJECT + PEAKER POWER PLANT) USING THE WOCAP APPROACH**

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	100	0.8
Project Contributions – Mitigated		
Peaker Power Plant Construction ^d	--	--
Peaker Power Plant Operations	3.1	1.1E-06
Project Contribution	1.7	0.02
Total Mitigated Project + Peaker Power Plant	4.8	0.02
MEIR Location (UTM – X)	563420	563020
MEIR Location (UTM – Y)	4183440	4183640
Cumulative Contributions – Year 2024		
Highway ^e	4.0	0.19
Other ^f	21.9	0.02
Permitted ^g	3.0	0.14
Dynegy ^h	0.1	0.0004
Schnitzer ⁱ	20.3	0.36
Port ^j	123.4	0.24
Rail ^k	89.8	0.14
Street ^l	4.4	1.29
<i>Cumulative Total</i>	<i>266.9</i>	<i>2.38</i>
Project Plus Cumulative		
Mitigated Project + Peaker Power Plant Total	4.8	0.02
Cumulative Contributions	266.9	2.38
<i>Cumulative Total</i>	271.7	2.40

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), Mitigation Measure AIR-2c (Diesel Backup Generator Specifications), and Mitigation Measure AIR 5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction required by AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, PM_{2.5} concentrations include exhaust only, tire wear, brake wear, and road dust.

^d Construction of the Peaker Power Plant Variant occurs during Phase 1 of the project, before any residents move in, and so variant construction only impacts off-site receptors.

^e Highway includes exhaust and fugitive dust emissions from vehicles and trucks driving on highways.

^f Other includes ferries and truck-related businesses.

^g Permitted includes all BAAQMD-permitted stationary sources in West Oakland except the Port of Oakland and Schnitzer Steel, such as Custom Alloy Scrap Sales, East Bay Municipal Utility District, and backup emergency generators.

^h Dynegy includes TAC emissions from the Peaker Power Plant, a BAAQMD-permitted source.

ⁱ Schnitzer includes TAC emissions sources associated with the Schnitzer Steel facility, including permitted stationary sources, ocean-going vessels and trucks.

^j Port includes TAC emissions sources associated with the Port of Oakland, including permitted stationary sources, ocean-going vessels, harbor craft, dredging, cargo handling equipment, the BNSF railyard, and trucks.

^k Rail includes the UP railyard and both freight and passenger locomotives operating on the various rail lines in the area.

^l Street includes exhaust and fugitive dust emissions from vehicles and trucks driving on local roadways.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

Biological Resources

The Peaker Power Plant Variant would result in the *same biological resources impacts and mitigation measures* identified for the proposed Project. The modifications proposed to the east and west wings of the historic 601 Embarcadero West building (contributor to the PG&E Station C API), demolition of the fuel storage tank and subsequent construction of new buildings would occur near existing street trees and buildings that have been vacant or infrequently used.

Therefore, the variant may impact protected nesting birds or special-status or protected bats, or protected trees that exist adjacent to the variant site, same as described for the proposed Project. Mitigation measures identified in Section 4.3 would reduce this impact to less than significant. No new or changed impacts or mitigation measures would be required.

Cultural and Tribal Cultural Resources

Developing the Peaker Power Plant Variant would result in *new impacts and mitigation measures for historic resources* not identified for the proposed Project. Each is discussed in detail below.

Historical Resources

As introduced in the *Description* above, the Peaker Power Plant Variant includes a portion of the PG&E Station C API and is wholly contained within the proposed Project boundaries, as shown in **Figure 4.4-1, Historic Resources** (in Chapter 4), and in Figure 5-3, Peaker Power Plant Site Plan. The L-shaped architectural resources study area for this variant is bounded by 2nd Street to the north, a pedestrian-only section of Water Street to the south, the half-block containing the fuel storage drum at Clay Street and Embarcadero West to the east, and MLK, Jr. Way to the west. The study area encompasses 2.5 city blocks that contain the PG&E Station C API (consisting of two buildings – 601 Embarcadero West and 101 Jefferson Street) and one structure (fuel storage tank).

The building at 601 Embarcadero West, including all wings and additions, has been determined individually eligible for listing on the California Register of Historical Resources and the National Register of Historic Places. It is also a contributing element to the PG&E Station C API. As such, it is considered a historical resource for the purposes of CEQA. The parcel containing the fuel storage tank is outside of the PG&E Station C API and is not considered a historical resource for the purposes of CEQA.

The modifications to 601 Embarcadero West proposed under the Peaker Power Plant Variant would directly impact an historic resource through demolition of portions of the building. Additionally, while removal of the fuel storage tank would have no impact to historic resources, construction of a new building on the site of the fuel storage tank immediately adjacent to 601 Embarcadero West could potentially result in indirect impacts to a historical resource depending on the design, massing, intended uses, or other factors that could alter the setting immediately adjacent to the PG&E Station C API (see Figure 5-7).

Therefore, the following *new impacts to a historic resource* are identified specific to the Peaker Power Plant Variant:

Impact CUL-8: The proposed Project, with the Peaker Power Plant Variant, would directly impact a historical resource through removal of portions of the east and west wings of the building at 601 Embarcadero West. (Criterion 1) (*Significant and Unavoidable with Mitigation*)

Removal of portions of the east and west wings would alter the existing design of 601 Embarcadero West. The building is recognized as a contributor to the PG&E Station C API and has been given an OHCS rating of A1+ for its architecture and its association with the industrial history of Oakland (see Appendix CUL-1). Character-defining features of the PG&E Station C API include:

- Monumental scale of the buildings;
- Visibility of buildings from outside the immediate site
- Quoined piers;
- Round-headed windows;
- Classical cornices; and
- Open and industrial setting.

The primary façade of 601 Embarcadero West is the north façade, facing and parallel to both the railroad tracks and Embarcadero West. It is the tallest and longest façade, and its architectural detailing establishes the overall design of the API. The east and west building wings are secondary façades, each facing a city street and visible from the public right of way. The west wing was constructed prior to the Embarcadero West elevation, and does not follow the design scheme later established for the API. It is smaller in elevation, constructed in brick, and had different and smaller architectural bays. The east wing was constructed before (75 Jefferson Street) and concurrent with (51 Jefferson Street) the primary façade. As a consequence, the 51 Jefferson Street portion is more consistent with the primary façade in its design. Both sections are shorter in height and employ architectural detailing that is smaller in scale than that on the primary, northerly façade.

This variant includes removal of portions of the building (51 Jefferson Street, constructed in 1928, and 64 MLK, Jr. Way, constructed c.1889). The sections slated for demolition are the southernmost portions of the two wings. These wings are secondary façades, fronting industrial lots that once contained related functions of PG&E Station C, and form part of its characteristic U-shaped configuration. Loss of these portions would still retain this overall geometry but would shorten the wings and reduce the footprint of the building.

Under the Peaker Power Plant Variant, the building and the API would retain most of those characteristics identified as significant to their historical importance, including the industrial setting and views through the API (see the list of character-defining features above.) The primary Embarcadero West elevation would remain unchanged, as would the appearance of the building

from the railroad corridor within the API. Those architectural elements commonly associated with the API, and documented in the historical record, would also remain unchanged. No historical associations to important architectural or engineering professionals are lost.

However, while all other character-defining features would remain intact, the footprint of the building would be altered and the monumental size of the building would be diminished. Alterations that demolish or materially alter in an adverse manner those physical characteristics of a resource that convey its historical significance would materially impair the significance of the historic resource (CEQA Section 15064.5(2)) resulting in a significant impact. Demolition of portions of both the east and west wings would result in a loss of historic fabric and would constitute just such a significant impact. While CEQA provides provisions to potentially mitigate impacts on historic resources to less than significant if they follow the Secretary's Standards (CEQA Section 15064.5(3)), incorporation of the Standards in this case would not mitigate the loss of the building sections located at 601 Embarcadero West. Therefore, the Peaker Power Plant Variant would result in a significant and unavoidable impact to the historic resource.

While the loss of portions of the wings cannot be mitigated to a less than significant level, the following mitigation measures would lessen the impacts of new construction to the greatest extent possible.

Mitigation Measure CUL-6a: Peaker Power Plant – HABS Documentation (Level II).

Prior to demolition of portions of the building sections located at 601 Embarcadero West, the entire building shall be recorded to the standards required by the Historic American Buildings Survey – Level II. Copies of the documentation shall be deposited locally in the Oakland History Room at the Oakland Public Library and other locations as determined by the City of Oakland.

Mitigation Measure CUL-6b: Peaker Power Plant – Secretary of the Interior's Standards Compliance Analysis.

Prior to demolition, architectural plans for the new end walls on the shortened east and west wings and other modifications to the building shall be reviewed by a professional meeting the Secretary of the Interior's Professional Qualification for Architectural History and/or Historic Architecture to ensure compliance with the Secretary of the Interior's Standards for Rehabilitation. The professional's findings and recommendations shall be subject to review and approval by the City. The findings of this review shall be documented in a Standards Compliance Report.

Significance after Mitigation: Significant and Unavoidable.

Impact CUL-9: The proposed Project, with the Peaker Power Plant Variant, would not impact a historical resource through introduction of new development that could obstruct views into the resource, a character-defining feature of the PG&E Station C API. (Criterion 1) (*Less Than Significant*)

As noted above, the PG&E Station C API has two character-defining features that could be impacted by development on the fuel storage tank location: visibility of the buildings from outside the immediate site and the open and industrial setting. The eastern boundary of the API runs parallel with Jefferson Street and the western boundary runs parallel with MLK, Jr. Way. The UPRR railroad tracks and Embarcadero West bisect the API. When standing along the tracks on either Jefferson or MLK, Jr. Way, the view through the site are framed by the two contributing buildings to the API: 601 Embarcadero West to the south and 101 Jefferson Street to the north.

The Peaker Power Plant variant includes redevelopment on the fuel drum site, located on the west side of Jefferson Street, immediately outside the API. This site would be developed with a mixed-use building wholly contained on the fuel drum site. No aspect of the development would extend into the public right of way, into the API, or otherwise connect to the contributors of the API. Therefore, the new development would not obstruct views from immediately outside the API from either Jefferson Street or MLK, Jr. Way. The open and industrial setting would remain intact as no proposed modifications within the API are proposed under the Peaker Power Plant Variant. As a result, impacts on the PG&E Station C API views and setting are less than significant.

Significance after Mitigation: No mitigation necessary.

The following cumulative impact to the character-defining setting of a historic resource is also identified specific to this variant:

Impact CUL-3.CU: The Project, in combination with the Peaker Power Plant Variant, would contribute to a citywide cumulative impact on cultural and historic resources identified in the Downtown Oakland Specific Plan EIR through the loss of the historic wings of the Peaker Power Plant. (*Significant and Unavoidable with Mitigation*)

The Draft Downtown Oakland Specific Plan EIR (DOSP DEIR, 2019) identifies a significant and unavoidable citywide cumulative impact with regard to cultural resources.

Cumulative Impact CULT-1: Implementation of the Specific Plan and its associated development, combined with cumulative development in the Plan Area and citywide, including past, present, existing, approved, pending, and reasonably foreseeable future development would contribute to a significant and unavoidable adverse cumulative impact to cultural and historical resources. (DOSP DEIR, 363)

The findings in the DOSP DEIR are primarily connected to demolition or alteration of historic resources. This includes individual resources as well as the potential for incompatible infill development within ASIs and APIs (DOSP DEIR, 353-359 & 362-363). The proposed Project, with the Peaker Power Plant Variant includes partial demolition of an eligible historic resource (Peaker Power Plant). This loss of historic fabric contributes to the significant and unavoidable cumulative, citywide impact identified in the DOSP DEIR. Even with implementation of Mitigation Measures CUL-6a and CUL-6b, this impact cannot be reduced to less than significant. The same mitigation measures would reduce, if not entirely avoid, this impact.

Mitigation Measure CUL-6a (Peaker Power Plant – HABS Documentation [Level II]). (see Impact HAZ-8)

Mitigation Measure CUL-6b (Peaker Power Plant – Secretary of the Interior’s Standards Compliance Analysis). (see Impact HAZ-8)

Significance after Mitigation: Significant and Unavoidable.

Archaeological Resources, Human Remains, and Tribal Cultural Resources

The Peaker Power Plant Variant would result in the **same archaeological resources, human remains and tribal cultural resources impacts and mitigation measures** identified for the proposed Project without this variant. While excavation and construction would be involved in other portions of the Project site, the proposed building modifications, demolition of the existing fuel storage tank, and construction of a new building would involve the similar construction and excavation activities on the variant site as previously analyzed for the proposed Project, and the existing environmental setting, particularly regarding subsurface conditions and likelihood of discovery during construction, is the same as described in Chapter 4 for the proposed Project. Mitigation measures in Section 4.4 to address archaeological and tribal cultural resources and human remains would reduce cultural resources impacts to less than significant. No new or changed impacts would be required for these topics.

Energy

The Peaker Power Plant Variant, which includes the full buildout of the Project, would result in similar **energy impacts for construction even though there would be minor additional energy use and different energy impacts for operation due to conversion of the Peaker Power Plant than** identified for the proposed Project without this variant.

Construction Energy Use

Construction-related energy use was estimated for activities that would be associated with building renovation and conversion of the jet fuel turbines to a battery storage facility. Construction would occur from 2022 to 2023 and involve additional off-road construction equipment activity and on-road construction worker and truck trips. All other construction activities associated with ballpark and non-ballpark building construction would remain the same as the Project.

Construction energy use for the Peaker Power Plant Variant was calculated using the same methodology as the Project. The construction equipment list for the Peaker Power Plant Variant was provided by the Project sponsor. Diesel and electricity usage from off-road equipment and on-road construction vehicles are shown in Table 5-10. No additional water was assumed to be used during construction of the Peak Power Plant Variant. Details of the construction assumptions are presented in **Appendix ENE**.

TABLE 5-10
PEAKER POWER PLANT VARIANT CONSTRUCTION ENERGY RESOURCE USE

Energy Use Type	Unit of Measure	Mitigated Project Construction Usage ¹	Peaker Power Plant Construction ²	Combined Project and Peaker Power Plant Variant
Electricity				
Water Consumption	kWh/Project	815,619	0	815,619
Off-road Equipment ²	kWh/Project	3,019,591	2,882	3,022,473
Total Electricity Use	kWh/Project	3,835,210	2,882	3,838,092
Annual Average Electricity Consumption³	kWh/year	547,887	412	548,299
Diesel				
On-road vehicles	gallons/Project	777,648	4,884	782,532
Off-road equipment	gallons/Project	1,845,763	8,486	1,854,249
Total Diesel Use	gallons/Project	2,623,410	13,370	2,636,780
Annual Average Diesel Use³	gallons/year	374,773	1,910	376,683
Gasoline				
On-road vehicle	gallons/Project	869,915	9,892	879,806
Total Gasoline Use	gallons/Project	869,915	9,892	879,806
Annual Average Gasoline Use³	gallons/year	124,274	1,413	125,687

NOTES:

¹ See Section 4.5, Energy, Table 4.5-3.

² See Energy Technical Report, Tables 20 through 23.

³ Annual averages are estimated by dividing the total use values by the expected 7-year duration of construction.

SOURCE: Ramboll, 2020. (Detail provided in Appendix ENE to this Draft EIR.)

As shown in Table 5-10, construction of the Peaker Power Plant Variant would result in minor additional amounts of electricity, diesel, and gasoline consumption relative to the Project. The variant's peaker power plant overall construction energy{ XE "energy" } use requirements combined with the Project would not be substantial relative to the total sales of transportation fuels in Alameda County. In addition, implementation of Mitigation Measure AIR-1b (Criteria Air Pollutant Controls) would help avoid wasteful or inefficient use of energy during construction by requiring that equipment be well maintained, and require that idling of commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower be limited to a maximum of 2 minutes in accordance with the Title 13, Section 2485, of the California Code of Regulations and Title 13, Section 2449, of the California Code of Regulations. Implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) would avoid inefficient use of energy by requiring newer, more efficient off-road construction equipment. Therefore, construction of the Peaker Power Plant Variant would not result in wasteful, inefficient, or unnecessary consumption of fuel or energy, or conflict with adopted energy conservation plans or violate energy standards. The impacts would be less than significant.

Operational Energy Use

The Peaker Power Plant Variant would result in avoided jet fuel energy consumption when operations of the current Peaker Power Plant would be converted to operations of a battery storage facility. The existing Peaker Power Plant consumes an average of 868,528 gallons per year of jet fuel to generate an average of 8,187 MWh per year of electricity. The battery storage facilities would charge themselves from the existing electrical grid using solar and wind power that would have otherwise been curtailed during peak curtailment months during periods of the day when overall energy consumption is low and then would supply the stored electricity when the daily demand is at its peak. It is estimated that the battery storage facility would supply up to 45,068 MWh per year of electricity during peak use periods, which would result in an annual reduction in jet fuel consumption of 868,528 gallons. This energy reduction, as well as methods used for calculations, are shown in Table 24 in Appendix ENE.

Operation of the Peaker Power Plant Variant would result in a beneficial impact associated with a reduction in the use of jet fuel while resulting in a net reduction in available peak use electricity of only 234 MWh per year. There would be no potential for the Peaker Power Plant Variant to result in wasteful, inefficient, or unnecessary consumption of fuel or energy, or to conflict with an adopted energy conservation plan or violate energy standards.

Geology, Soils and Paleontological Resources

The Peaker Power Plant Variant would result in the *same geology, soils, and paleontological resources impacts* identified for the proposed Project without this variant. The proposed building modifications, demolition of the existing fuel storage tank, and construction of new buildings would involve construction and excavation activities on the portion of the Project site where the Peaker Power Plant and associated fuel tank are located. The existing environmental setting, particularly regarding subsurface conditions and the likelihood of discovery of paleontological resources during construction, is the same as described in Chapter 4 for the proposed Project. No new or changed impacts would be required for these topics.

Greenhouse Gas Emissions

Construction and operation of the Peaker Power Plant Variant (which includes the Project and the Peaker Power Plant) would result in additional construction greenhouse gas (GHG) emissions compared to the Project, due to additional construction activity associated with physical changes to the power plant buildings. The shutdown of existing fossil-fueled power generation would result in reduced emissions by discontinuing on-site fossil fuel combustion for power generation, improving grid reliability and providing a source of stored renewable electricity that reduces the need for fossil fuel Peaker Power Plant operation. However, because this variant includes the full buildout Project, this variant would result in *similar GHG emissions impacts and mitigation measures* identified for the proposed Project.

GHG Construction Emissions

Construction GHG emissions were estimated for activities associated with power plant building renovation and conversion from jet fuel turbines to battery storage. Construction would occur from 2022 to 2023 and involve additional off-road construction equipment activity and on-road

construction worker and truck trips. All other construction activities associated with ballpark and non-ballpark building construction would remain the same as the Project. Details of the construction assumptions are presented in Appendix AIR.

Construction for the Peaker Power Plant Variant would emit approximately 219 MT CO₂e over the period from 2022 to 2023, as shown in Table 105 of the *Air Quality Technical Report* (see Appendix AIR). The additional construction emissions relative to the Project amount would be approximately 7 MT CO₂e per year when amortized over the 30-year life of the project, resulting in total amortized construction emissions for the Peaker Power Plant Variant of approximately 1,066 MT CO₂e per year.

GHG Operational Emissions

Since the overall square footage of the Project will not be increased in the Peaker Power Plant Variant, the land uses, activities, attendance and population data are generally the same as the Project. Additionally, mobile trips associated with hauling, vendor deliveries, and workers would also generally remain the same. Therefore, operational emissions associated with these activities are expected to be the same as the Project's operational emissions, since the overall population and Project activities will be identical.

However, the Peaker Power Plant Variant is expected to have significant reductions in operational GHG emissions, as compared to the proposed Project. A reduction in direct emissions results from the cessation of fossil fuel combustion at the plant. The direct avoided emissions were calculated based on the average annual Peaker Power Plant electricity generation and fuel consumption for 2010 to 2018, and the difference between the GHG intensity of the Peaker Power Plant (2010-2018 average) and the GHG intensity of the energy mix that is replacing it. As described in the *Air Quality Technical Report*, conversations with CARB and information from Vistra (the Peaker Power Plant operator) indicate that one-third of the energy supplied to the battery energy storage system is guaranteed to be from zero-carbon sources, with the remaining two-thirds from the grid. As shown in Table 110 of the *Air Quality Technical Report*, the average avoided direct emissions from the power plant conversion is estimated to be 8,049 MT CO₂e per year.

Additionally, the Peaker Power Plant Variant would result in avoided indirect GHG emissions that would not occur across the grid as the battery energy storage system would provide improvements to grid reliability, promote the transition to more renewably sourced electricity, and eliminate the need for additional fossil fuel Peaker Power Plant operation. The *Air Quality Technical Report* (see Appendix AIR) provides an estimate for avoided indirect emissions, based on the assumption that the battery storage system stores electricity from renewable power sources such as solar and wind power generation during off-peak periods, and the average renewable curtailment rates from the California Independent System Operator (CAISO) in the period from May 2014 through August 2019. The battery energy storage system is assumed to be fully charged to its maximum capacity of 360 MWh/day using solar and wind power that would have

otherwise been curtailed⁷ during peak curtailment months and during times when there are proportionally lower charge rates. This is a conservative estimate as it is based on historical curtailment. As California increases solar and wind generation capacity, the battery energy storage system could potentially be fully charged using renewable sources all year, even in the historically low-curtailment months. As shown in Table 111 of the *Air Quality Technical Report*, the average avoided indirect emissions from the power plant conversion are estimated to be 9,129 MT CO₂e per year.

GHG Emissions Impact

Table 5-11 below presents total annual GHG emissions (amortized construction plus operations) under the Peaker Power Plant Variant (which includes Project plus Peaker Power Plant) at Full Buildout (2027), showing that net new emissions for the variant would be approximately 33,760 MT CO₂e/year without mitigation, which is approximately 16,360 MT CO₂e/year less than the Project at Full Buildout. As such, the mitigation obligation with the Peaker Power Plant Variant would be less than it would be with the Project in order to meet the “no net new” emissions threshold under **Impact GHG-1**. With respect to **Impact GHG-2**, the Peaker Power Plant Variant would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. Rather, it would support the state’s goal to transition to more renewably sourced electricity, and eliminate the combustion of fossil fuels to generate electricity, both of which are general goals of the 2017 Scoping Plan Update. Thus, with implementation of **Mitigation Measures GHG-1a** and **GHG-1b**, the GHG emissions impact of the Peaker Power Plant Variant would remain **less than significant with mitigation**, as identified for the Project without this variant.

TABLE 5-11
ESTIMATED GHG EMISSIONS FOR PEAKER POWER PLANT VARIANT (PROJECT + PEAKER POWER PLANT) AT FULL BUILDOUT (2027)

Source	MT CO ₂ e per year
Ballpark emissions ^a	10,386
Project Non-Ballpark emissions ^a	48,067
Peaker Power Plant Variant construction emissions (amortized over 30 years) ^b	1,066
Peaker Power Plant avoided direct emissions ^c	-8,049
Peaker Power Plant avoided indirect emissions ^d	-9,129
Total Variant emissions (unmitigated)	42,341
A's Related Existing Conditions emissions ^e	-8,581
Net new Variant emissions (unmitigated)	33,760
ABBREVIATIONS: CO ₂ e – carbon dioxide equivalents; GHG – greenhouse gas; MT – metric ton NOTES: a. From Section 4.7 GHG Emissions, Table 4.7-6 b. From Section 4.7 GHG Emissions, Table 4.7-5, adjusted for additional emissions from Peaker Power Plant Variant, as shown in Table 105 of the Air Quality Technical Report, c. From Air Quality Technical Report, Table 110 d. From Air Quality Technical Report, Table 111	

⁷ Curtailment is the purposeful reduction in renewable electricity output below the levels that could otherwise have been produced, typically done when supply exceeds demand.

e. From Section 4.7 GHG Emissions, Table 4.7-4
SOURCE: ESA and Ramboll (Appendix AIR)

Hazards and Hazardous Materials

The Peaker Power Plant Variant would result in *similar hazards and hazardous materials impacts* identified for the proposed Project, except that removal of the jet storage tank from part of the variant site and redeveloping that property with mixed use development presents a potentially significant impact that can be mitigated to a less than significant level, as discussed below..

This variant would involve the same land uses (specifically residential, commercial and open space) and construction and excavation activities previously considered in the analysis of the proposed Project. This variant would demolish portions of the existing wings of the power plant, which are likely to contain hazardous materials such as lead and asbestos, and would also demolish the existing fuel storage tank that would not otherwise occur with the proposed Project and was therefore not previously considered. As discussed in detail in Chapter 4, the Project site, including the site of this variant, is subject to existing land use covenants (LUCs) with their associated plans enforced by the Department of Toxic and Substances Control (DTSC). The Project sponsor is proposing to modify and consolidate existing LUCs and update related plans, and the changes to the variant site and the potential to encounter hazardous materials in building, soil gas, soil, and groundwater would be subject to the requirements of the revised LUC and associated plans and would require the approval of the DTSC. Because the consolidated LUC and related plans are not available at this time, impact similar to Impact HAZ-2 would apply, as modified below to address removal of the fuel tank component of this variant. Mitigation Measures HAZ-1a, 1b, 1c and 1d would continue to apply and are applicable to development of the whole Project site, ensuring appropriate oversight by DTSC and all actions necessary to protect human health and the environment.

Impact HAZ-4: The proposed Project, with the Peaker Power Plant Variant, would have the potential to encounter hazardous materials which could create a significant hazard to the public or the environment. (Criterion 5) (*Less than Significant with Mitigation*)

Mitigation Measure HAZ-2: Peaker Power Plant Fuel Tank Decommissioning and Training/Oversight.

Prior to demolition or removal of the fuel tank, the Project applicant shall have decommissioned the fuel tank parcel, subject to the oversight and inspection of the Oakland Fire Department. The decommissioning activity shall be performed by qualified personnel trained and certified in environmental health and safety procedures pursuant to OSHA 29 CFR 1910.120, HAZWOPER Training requirements, including appropriate training for enclosed space activities. The Project sponsor shall ensure that full-time observation under a Site Management Plan (SMP) during actual removal of the tank shall occur to determine if evidence of subsurface impact is present.

Mitigation Measure HAZ-1a: Preparation and Approval of Consolidated RAW, LUCs and Associated Plans. (see Section 4.8, Hazards and Hazardous Materials)

Mitigation Measure HAZ-b: Compliance with Approved RAW, LUCs and Associated Plans. (see Section 4.8, Hazards and Hazardous Materials)

Mitigation Measure HAZ-1c: Health and Safety Plan. (see Section 4.8, Hazards and Hazardous Materials)

Mitigation Measure HAZ-1d: Hazardous Building Materials. (see Section 4.8, Hazards and Hazardous Materials)

Significance after Mitigation: Less than Significant.

With implementation of these mitigation measures, no significant hazardous materials impact would occur with this variant. No other new or changed impacts or mitigation measures would be required.

Hydrology and Water Quality

The Peaker Power Plant Variant would result in the *same hydrology and water quality impacts* identified for the proposed Project without this variant because the hydrologic setting of this variant site is largely the same as described generally for the broader Project site. The development program with this variant is the same as the proposed Project, as are the range of land uses, construction activities, and infrastructure improvements considered. As a result, stormwater runoff would be handled similarly and there would be no new or changed impacts for these topics. Mitigation Measures HYD-1a, HYD-1b, HAZ-1a, HAZ-1b, and HAZ-1c would continue to apply and are applicable to development of the whole Project site.

With regard to the topic of flooding, similar to the Project site, the Peaker Power Plant Variant site is located partially within the Special Flood Hazard Area (SFHA) Flood Zone AE (elevation 10 feet, NAVD 88 datum) as shown in the most recent Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), with a Base Flood Elevation (BFE) of approximately 3.9 feet Oakland datum (OCD) (Moffat & Nichol, 2019). **Figure 5-11, Conceptual Grading - Peaker Power Plant Variant**, shows that the building on the Peaker Power Plant Variant site would have a finished floor elevation of at least 6.0 feet, which would be higher than the BFE of approximately 3.9 feet. **Mitigation Measure HYD-2** (Structures in a Flood Zone) identified for the Project would also apply to the variant site and would require that the Project's final grading plans for development within the SFHA show finished site grades and floor elevations above the BFE. With implementation of Mitigation Measure HYD-2, the Project with the Peaker Power Plant Variant would not place structures within flood hazard area that would impede or redirect flood flows, exposing people or structures to a significant risk of loss, injury or death involving flooding, and impacts would be less than significant, the same as identified for the Project.

With regard to flooding and sea level rise, along the northern edge of the site, including at the Peaker Power Plant Variant site, grades would conform to existing roadway elevations of approximately 4.5 feet OCD and would be above the BFE. The proposed mixed use building on the Peaker Power Plant Variant site would have a finished floor elevation of at least 6.0 feet which is also above the BFE; however, adaptations would be necessary to keep up with rising sea

levels in the future. Future actions, such as elevating the wharf edge, or creating landscape berms, steps, or amphitheaters above the BFE with sea level rise behind the wharf, could be taken to adapt it to increased risk of inundation, which could reduce risk of flooding from sea level rise across the site (Moffat & Nichol, 2019).

Because strategies have been developed to adapt the Project site to increased risk of inundation, and the Project would be required to meet conditions related to sea-level rise pursuant to AB 1191, including adaptive management and contingency plans, the proposed Project with the Peaker Power Plant Variant would continue to have a less than significant effect due to exposing people or structures to a substantial risk of loss, injury or death due to sea level rise related flooding.

Therefore, the variant would result in the same impacts related to hydrology and water quality. No new or changed impacts would occur and no new mitigation measures would be required.

Figure 5-11, Conceptual Grading - Peaker Power Plant Variant

Land Use, Plans and Policies

The proposed Project with the Peaker Power Plant Variant would result in the *same land use, plans and policies impacts* identified for the proposed Project without this variant because the variant would redistribute rather than increase the amount and types of development proposed. Also, the proposed conversion of the Peaker Power Plant to battery storage would not fundamentally change its land use, which would remain in the *Utility and Vehicular Civic Activity* land use classification pursuant to the Oakland Zoning Regulations (17.10.230). However, the proposed retail, dining and open space uses proposed immediately south and west the power plant would be a change of land use classification and use, but would not be in conflict with the battery storage given the physical separation of the uses (as a new wall would exist on the south end of the power plant), combined with various mitigation measures referenced below. The mixed use development envisioned for the site of the fuel storage tank could include new residential, mixed uses including retail/dining and open spaces. These uses would be compatible with the other new ballpark district uses of the proposed Project and the adjacent DOSP uses. From a broader perspective, these uses would be introduced into an existing industrial areas. Nonetheless, several mitigation measures addressing potential land use conflicts are identified for the proposed Project (see Impact LUP-2 in Section 4.10, *Land Use, Plans and Policies*) which would continue to apply to this variant.

Like the proposed Project, the variant site is within BCDC's Seaport Plan's designated Port Priority Use Area. The variant, like the Project, would also modify and reuse a property that is asset of the public trust and therefore would potentially conflict with the Public Trust Doctrine. In the absence of approvals from the California State Lands Commission and BCDC pursuant to AB 1191 (see Impacts LUP-3 and LUP-4, in Section 4.10, *Land Use, Plans and Policies*), the Project with the Peaker Power Plant Variant could not proceed, the same as for the proposed Project.

Also, parts of the Peaker Power Plant Variant site are within the area where the Project proposes a General Plan Amendment from the "General Industry and Transportation" land use classification

to “Regional Commercial.” Like the Project, the variant would include a General Plan Amendment to change the land use designation of the portion of the variant site east of Jefferson Street (fuel storage tank) from the Estuary Policy Plan’s Retail Dining Entertainment 1 (RD&E-1) land use designation to RD&E-2, which would permit residential use. This change would not put the variant in conflict with the overall goals and policies of the Estuary Policy Plan, such as those encouraging complementary new uses as industrial, warehousing and maritime support areas transition uses that remain. These policies are detailed in the regulatory setting in Section 4.10 of Chapter 4, and discussed in Impact LUP-7 (Development of the Project would not fundamentally conflict with City of Oakland Estuary Policy Plan) in Chapter 4. With implementation of the aforementioned Impact LUP-2 mitigation measures addressing land use compatibility, these impacts would not be significant. The same mitigation measures would apply to the Peaker Power Plant variant.

Noise

The Peaker Power Plant Variant would result in the *same noise impacts and mitigation measures* identified for the proposed Project.

Construction

With the Peaker Power Plant Variant, there would be additional construction activities resulting in more construction-related noise in the vicinity, potentially exacerbating impacts already identified as significant and unavoidable with the proposed Project: Impact NOI-1, temporary or periodic increases in noise from construction; Impact NOI-2, groundborne vibration during construction; Impact NOI-1.CU, contribution to cumulative temporary or periodic increases in noise levels due to construction.

Operations

From an operational standpoint, the battery storage facility, while including transformers on the east and west sides, would be anticipated to generate lower noise levels than those of the existing peak plant turbine operations. While this could be a localized beneficial impact of the variant, the existing noise from the adjacent Union Pacific Railroad (UPRR) tracks and associated operations would likely render this beneficial impact negligible. With modifications of the power plant wings and construction on the fuel storage tank site, the proposed project with the Peaker Power Plant Variant would redistribute, but not change or increase, development and uses proposed as part of the Project. As a result, travel patterns into and out of the site could be somewhat different than with the Project, but the overall vehicle miles travelled (VMT), travel forecast, modes of travel, and trip distribution outside the immediate area would be the same. Minor changes to roadway volumes resulting from would not be expected to change the roadside noise level predictions estimated for the proposed Project, and significant and unavoidable impacts related to traffic would be unchanged (Impact NOI-2.CU, contribution to increased noise due to Project-related traffic, and Impact NOI-3, increased noise due to Project-related traffic and concert events at the ballpark). Therefore, operational noise impacts of the Peaker Power Plant Variant would be similar from those of the proposed Project (Impact NOI-2.CU, contribution to increased noise due

to Project-related traffic, and Impact NOI-3, increased noise due to Project-related traffic and concert events at the ballpark).

Population and Housing; Public Services; and Recreation

The Peaker Power Plant Variant site is within the proposed Project site and shares its setting. As a result, it would result in the *same impacts and mitigation measures for population and housing, public services, and recreation* as those identified for the proposed Project without this variant. These topics are addressed together here since they similarly relate to anticipated population and development intensity of the Project. As discussed above in the *Description* for this variant, maximum building heights and a range of land uses frame the maximum development that could occur across the Project (see Table 3-1 in Chapter 3), including development and uses specific to the variant. In other words, this variant would result in the same development program and land uses as the proposed Project without this variant – uses, including residential uses, would be redistributed, not increased. Therefore, the variant would result in the same inducement of growth, levels of demand for public services, and the number of users and the frequency of use of nearby recreational facilities. No new or changed impacts would occur and no new mitigation measures would be required.

Transportation and Circulation

The Peaker Power Plant Variant would result in the *same transportation and circulation impacts and mitigation measures* identified for the proposed Project. Access to the Peaker Power Plant Variant site would be provided along Embarcadero West or through development block #18 as an easement, or through the combination of the blocks. With modifications of the power plant wings and construction on the fuel storage tank site, the proposed Project with the Peaker Power Plant Variant would redistribute, but not change or increase, development and uses proposed as part of the Project. As a result, travel patterns to and from the site could be somewhat different than with the Project, but the overall vehicle miles travelled (VMT), travel forecast, modes of travel, and trip distribution outside the immediate area would be the same. For this reason, the Peaker Power Plant Variant would result in the same transportation impacts and mitigation measures identified for the proposed Project without this variant (as described in Section 4.15).. No new or changed impacts would occur and no new mitigation measures would be required.

Utilities and Service Systems

The Peaker Power Plant Variant would result in the *same utility and service system impacts and mitigation measures* identified for the proposed Project site without this variant. The utilities setting of this variant, which would be located on the Project site is largely the same as described generally for the broader Project site, except that some new/updated underground connections to off-site power facilities would be constructed. The development program with this variant is the same as the proposed Project, as are the range of land uses, construction activities, and infrastructure improvements considered. As a result, stormwater runoff would be handled similarly and demands for water and wastewater, and the generation of solid waste would be the same as the proposed Project. For these reasons, there would be no new or changed impacts and no additional mitigation measures required.

Summary

Development of the Project combined with the Peaker Power Plant Variant would result in new or different impacts related to historical resources (Impacts CUL-8, CUL-9, and CUL-3.CU), and hazards and hazardous materials (Impact HAZ-4):

- Impact CUL-8, related to demolition of portions of both the east and west wings of the Peaker Power Plant building would result in a loss of historic fabric. While the loss of portions of the wings cannot be mitigated to a less than significant level, Mitigation Measures CUL-6a (Peaker Power Plant – HABS Documentation [Level II]) and CUL-6b (Peaker Power Plant – Secretary of the Interior’s Standards Compliance Analysis) would lessen the impacts of new construction to the greatest extent possible; however, the impact would remain significant and unavoidable.
- Impact CUL-9, related to impacts on the PG&E Station C API views and setting would be less than significant, and no new mitigation would be required.
- Impact CUL-3.CU, related to the loss of historic fabric from the Peaker Power Plant modifications and its contribution to the significant and unavoidable cumulative, citywide impact identified in the DOSP DEIR would be significant and unavoidable after implementation of Mitigation Measures CUL-6a and CUL-6b.
- Impact HAZ-4 related to removal of the fuel tank on the variant site would be less than significant after implementation of new Mitigation Measure HAZ-2 (Peaker Power Plant Fuel Tank Decommissioning and Training/Oversight) and Project Mitigation Measures HAZ-1a through HAZ-1d.

There would be no new or changed impacts and no additional mitigation measures required for the remainder of topics discussed above.

5.2 Aerial Gondola Variant

5.2.1 Description

The Aerial Gondola Variant, includes the proposed Project as well as a new aerial gondola above and along Washington Street, extending from 10th Street in downtown Oakland to Jack London Square (location “2” on Figure 5-1). The gondola would be a mass transit option for people going to the Project site on a daily basis and for events. The gondola would transport people from downtown Oakland near the 12th Street BART Station and Oakland Convention Center to Jack London Square at the foot of Washington Street, where pedestrians would then walk (or bike) to the ballpark and adjacent mixed use development on the Project site. The gondola is proposed to traverse over the skyway between the courthouse and police building at Washington and 6th Street, over the Nimitz Freeway / Interstate 880 (I-880), and over the UPRR railroad tracks.

Figure 5-12, Conceptual Ropeline Plan and Profile, details the proposed gondola route and the gondola’s major elements: the gondola tower and aerial ropeline, the Jack London Square Station, and the Convention Center Station. Each is described below.

Figure 5-12, Conceptual Ropeline Plan and Profile

Gondola Tower and Aerial Ropeline

The gondola would travel overhead on a ropeline that would be centered on a single mid-span tower at 4th and Washington streets, approximately one block south of I-880 (see Figure 5-13). The tower would be approximately 230 feet tall, supporting the gondola system with asymmetrical span lengths of 1,530 feet (or 0.28 miles) to the Convention Center station to the north and 960 feet (or 0.2 miles) to the Jack London Square Station to the south.

Figure 5-13, Conceptual Tower Plan and Section, provides a close-in plan of the tower location and its surrounding uses. The tower location was selected to allow for a ropeline profile with the necessary clearances along the route and a gondola elevation in the area of the Hall of Justice (6th and Washington streets) high enough to avoid gondola passengers peering into the 6th floor windows. Additionally, the tower location between 4th and 5th streets was selected to avoid conflicts with the below grade BART tunnel and to prevent blocking commercial driveways serving the parking lot east of Washington Street – both shown on Figure 5-13. The four tower foundations, anticipated to be approximately 6-feet in diameter, would extend above grade and be approximately centered on the existing curb line in curb bump-outs. The above-grade foundations would reduce the existing sidewalk widths approximately 3 feet on each side of the street.

Illustrated in Figure 5-12, the gondola cabin clearance would range from approximately 106 to 150 feet as it traverses I-880. The closest distance from the bottom of the cabin to the ground is 30 feet (at the exit from the Jack London Station). The closest distance from the bottom of the cabin to an existing structure is roughly 55 feet (distance of the skybridge between the jail and county building near 7th Street). The conceptual ropeline profile was designed to allow for a minimum vertical clearance above the highway of 90 feet. This clearance far exceeds any minimums required. Preliminary conversations with representatives from Caltrans indicated that an Encroachment Permit and Airspace Lease will be required to cross over I-880.

The gondola cabin would maintain a vertical clearance of approximately 28 feet across the UPRR tracks along Embarcadero West, which exceeds the minimum vertical clearance of 23 feet, 6 inches required by the Burlington Northern Santa Fe (BNSF) Railroad and 23 feet, 4 inches required by the UPRR.

Figure 5-13, Conceptual Tower Plan and Section

Jack London Square Station

The proposed Jack London Square Station would be located at the south end of the gondola system. **Figure 5-14a, Jack London Square Station Layout**, and **Figure 5-14b, Jack London Square Station Sections**, show the conceptual design of the station, which would be centered on Washington Street and extend the block of Washington Street between Embarcadero West and Water Street.

The gondola boarding platform at the Jack London Square Station would be approximately 28 feet above the ground, and the overall station structure would be approximately 70 feet tall. A bank of three parallel and reversible escalators would run from the southwest corner of the station west into Water Street and towards the Project site (see Figure 5-14a and 5-14b). A set of stairs would parallel the escalators. The station would also have a bank of three elevators situated at the southeast corner of the station traveling between the street level and the gondola boarding platform level. The height of the structure would be similar to surrounding existing buildings.

With the variant, vehicular traffic other than emergency service vehicles may no longer have access to Washington Street between Embarcadero West and Water Street, especially during ballpark events. The diagonal escalator bank will extend into Water Street where it is anticipated that traffic flow would be limited compared to existing conditions.

Convention Center Station

The proposed Convention Center Station would be located at the north end of the gondola system, adjacent to the Oakland Convention Center, on 10th Street between Broadway and Clay Street. This station would be located on the northern boundary of the Old Oakland API. This district runs from 10th Street to 7th Street and contains up to one city block on either side of Washington Street. **Figure 5-15a, Convention Center Station Layout (Option 1)** and **Figure 5-15b, Convention Center Station Sections (Option 1)** show a conceptual design of the station, which would be centered on Washington Street and generally in the T-intersection of 10th Street, projecting south along Washington Street. The gondola boarding platform at this station would be approximately 60 feet above the ground, and the overall station structure could be nearly 100 feet tall.

A second design option is being considered that addresses different approaches for how the proposed station would relate to the existing Convention Center. **Figure 5-16, Convention Center Station Layout (Option 2)**, shows the section design option. Each option is described below:

Figure 5-14a, Jack London Square Station Layout

Figure 5-14b, Jack London Square Station Sections

Figure 5-15a, Convention Center Station Layout (Option 1)

Figure 5-15b, Convention Center Station Sections (Option 1)

Figure 5-15c, Convention Center Station Sections (Option 1)

Figure 5-16, Convention Center Station Layout (Option 2)

Option 1 – Cantilever Over Convention Center Parking Area

Figures 5-15a through 5-15c show the cantilever design option in which the station would be constructed adjacent to and overlapping the Convention Center rooftop parking. From the edge of the building, the station would extend approximately 60 feet south of 10th Street onto Washington Street. The station building would be arranged to allow gondola passengers to move from the gondola boarding station to the parking deck, but the structures would be independent structurally with a walkway spanning between the structures.

Similar to the Jack London Square Station, the conceptual layout for Option 1 of the Convention Center Station includes a double bank of three parallel and reversible escalators that would serve the platform with a midpoint landing between a lower and upper bank of escalators.

A set of stairs would parallel the escalators, and both would extend eastward, parallel to the Convention Center face, towards the 12th Street City Center BART Station at Broadway. The escalators and stairs would connect to a landing on the southeast corner of the station, and the final design would include a walkway between the gondola station and the upper parking level of the Convention Center. The station would have a bank of three elevators situated at the west end of the station traveling between the street level and the gondola boarding platform level.

The 10th Street roadway would be modified between Washington Street and Broadway to limit traffic flow to a single lane, allowing for the station structure at ground level and to maintain access to the adjacent properties.

Option 2 – Station Entirely Over 10th Street

Figure 5-16 shows the non-cantilevered option that would result in the station being entirely over 10th and Washington Streets with no connection to the existing Convention Center building. This option would be designed to avoid the Convention Center as well as the existing nearby commercial building (Swan's Market located at the southwest corner of Washington and 10th Street) and hotel/commercial building (Washington Inn located at the southeast corner of Washington and 10th Street). To achieve this, the proposed station footprint would be extended horizontally in both directions along and above 10th Street. The station would extend approximately 60 feet south of 10th Street onto Washington Street – a greater distance than Option 1. Option 2 would include two sets of three escalators running east and west parallel to the Convention Center with a midpoint landing between a lower and upper bank of escalators (rather than only one bank running east, as in Option 1). The station would have two banks of three elevators, along the north face of the station and near the tops of each escalator bank. The elevators would travel from street level to the gondola boarding platform level.

The 10th Street roadway would be modified between Broadway and Clay Street to limit traffic flow to a single lane, allowing for the station structure at ground level and to maintain access to the adjacent properties and on-street parking.

Pedestrian Movement and Operations

Gondola

The gondola would be designed to transport a maximum of up to 6,000 passengers per hour per direction. The system would include 20 total cabins, each of which could transport up to 30 passengers. The cabins would travel at approximately 11 miles per hour and cabins would be spaced approximately 375 feet apart. Hours of operation of the gondola, the cost for a ride, and personnel needed to operate the system have not been defined.

Emergency egress stairways are expected to be required in each station at the furthest point from the primary stairs in accordance with Code requirements. For the two Convention Center options (Figures 5-15a and 5-16), the rooftop parking deck may be utilized for emergency egress. The final locations of emergency egress stairways will be determined in the architectural design of the stations.

Station Vertical Circulation

Banks of three elevators would be situated at each station (two sets of three for Option 2 of the Convention Center Station) traveling between the street level and the gondola boarding platform level. The three elevators would be grouped for efficiency in passenger flow. Three elevators would ensure that a minimum of two elevators are available, should one elevator be down for maintenance. The throughput of the elevators would likely be fairly low given the inherent use by less-mobile people and people with strollers. The elevators in both stations would be Machine-Room-Less (MRL) type or traction-type elevators. Both types of elevators would be well suited for high-demand locations as they have a higher reliability and travel speed, and MRL elevators require less space than traction elevators, especially above the elevator hoistway. While MRL elevators are preferred, there is a proposed code change that may make the installation of MRL elevators difficult in the future. Thus, both traction and MRL elevator options are proposed given the uncertainty in the code change with regards to the timeline for Project completion.

Banks of three escalators at each station (two sets of three for Option 2 of the Convention Center Station) would provide access to each gondola station boarding platform to and from street level. The three escalators would be augmented by a parallel flight of stairs. Three escalators would ensure that a minimum of two escalators are available should one escalator be down for maintenance. Under event conditions, two escalators would travel in the direction of the primary flow of people with the third escalator reserved for the few people that desire to travel in the reverse direction. The stairs would likely be used for people traveling in the dominant travel direction. The escalators would be reversed after an event to match the primary flow direction. Under non-event conditions, two escalators would likely travel in the up-direction and the third escalator would travel in the down-direction.

Emergency egress stairways would likely be required in each station at the furthest point from the primary stairs. For the two Convention Center options, the rooftop parking deck may be utilized for emergency egress. The final locations of emergency egress stairways would be determined in the architectural design of the stations.

Consideration must be given to an automated and/or manual stopping of the escalators and elevators delivering people to the gondola loading platforms in the event that the gondola slows or stops. This system would prevent the accumulation of people on the platform level should this occur. There may be an opportunity to connect the control systems of the vertical circulation equipment to the gondola control system for automated management of the flow of people.

Street-Level Pedestrian Circulation and Queuing

As shown in **Figures 5-17, 5-18 and 5-19**, the passenger queuing and flow at ground level would vary depending on whether it is an event day or an average day. On average days, passengers approaching the gondola stations would utilize sidewalks and crosswalks to access the station area. It is anticipated that tickets would be sold by vending machines at ground level within the vicinity of the stations for passengers without a pass. After purchasing a ticket, passengers would access the escalators, elevators, and stairs at ground level. No queuing lines are expected at ground level on average days as the capacity of the escalators, elevators and stairs would be sufficient to transport passengers to the boarding level without significant delay. Passengers exiting the stations would utilize the same methods upon exiting the system.

Due to the significant quantity of people that would access the gondola system on event days, temporary queuing barriers would be placed at ground level within Water Street for the Jack London Station and within 10th Street for the Convention Center Station. These queue lines would organize and direct passengers to the escalators, elevators, and stairs. It is anticipated that roadway traffic would be closed for these areas during events. Passengers exiting the gondola system would be allowed to flow into Water Street at the Jack London Station and into 10th Street at the Convention Center Station where they would travel within the streets to the ballpark or on sidewalks to the BART Station.

Foundation Piles and Construction

Construction of the aerial gondola station and tower structures would involve numerous pile structures. The gondola station structures will each be supported by 36 to 64 drilled concrete piles approximately 30" in diameter. Each station structure will have piles grouped below the superstructure columns and cast in place concrete pile caps will connect the drilled piles to the above-grade concrete columns. The pile caps will reside just below grade and will be interconnected by below-grade concrete beams. The construction sequencing will likely start with the relocation of the utilities within the station areas. This work will likely utilize backhoe excavators. Following the utility work, drilled concrete piles will likely be installed around the perimeter of the foundation excavations to form a soldier-pile wall that will support the sides of the excavation during foundation construction. Once the shoring is in place, backhoe excavators will likely be utilized to excavate the existing pavement and soil down to the depth of the pile caps. The required drilled concrete piles will be installed at the base of this excavation and the pile caps will then be formed and poured.

Figure 5-17 Jack London Square Station Ground Plan

Figure 5-18 Convention Center Station Ground Plan (Option 1)

Figure 5-19 Convention Center Station Ground Plan (Option 2)

Once the foundations are complete, the excavation will be backfilled, compacted and the pavement replaced. It is anticipated that the drilled piles will be installed with a crane-mounted drill rig with a rotating auger bit. The concrete will likely be installed with a pump truck. It is anticipated that the work will take a series of weeks to complete with some road closures required in the vicinity of the work.

The tower foundations will consist of large diameter drilled concrete piles constructed within the sidewalk area on both sides of the street. The four piles, approximately 72" in diameter, will likely be drilled with a crane-mounted drill rig with a rotating auger bit. Other than utility relocations, no additional excavation is anticipated for the tower foundation construction. The concrete will likely be installed with a pump truck. It is anticipated that the work will take a series of weeks to complete with some road closures required in the vicinity of the work.

5.2.2 Study Area and Setting

The Aerial Gondola Variant is outside the proposed Project site, with its southern station at the foot of Washington Street, approximately two blocks west of the Project boundary, and its northern end at the Convention Center Station, ten blocks north of Embarcadero West, the northern boundary of the Project site. Therefore, the study area for this variant is extended to include this ten-block corridor along Washington Street, as shown in **Figure 5-20, Gondola Variant Study Area**.

Variant Approach to Analysis

Generally, the analysis of certain environmental topics relies on setting and project information that is more location specific than the analysis for other topics. Because (1) parts of this variant site are farther from the Project site than the Peaker Power Plant Variant (which is encompassed within the proposed Project's boundaries and changes the proposed use of particular parcels), and (2) neither the City, Port nor the Project sponsor control all properties within the Aerial Gondola Variant corridor, the analysis of certain conditions are based on generalized conditions obtained from available documented sources rather than site-specific studies. Impact determinations and mitigation measures reflect the specificity of information available for consideration in this Draft EIR. Site specific information not fully available for the gondola corridor pertain to soil, utilities and other subsurface conditions. However, the conceptual design of the gondola considered underground built infrastructure and associated geology on and adjacent to the site to determine the amount and scale of utility relocations, street renovations and foundation areas to support the stations and towers, as well as the conceptual locations of gondola infrastructure (SCJ Alliance, 2019).

If this variant is implemented with the proposed Project, all required and necessary site-specific information about the site conditions and project design and operations would be obtained and considered. As is typical for all the analysis in this project-level EIR, to the extent that final variant design and/or site information is substantially different than what is considered herein, appropriate additional environmental analysis would be conducted as required under CEQA standards.

Figure 5-20, Gondola Variant Study Area.

Historical Resources Setting

This subsection provides a description of the study area and setting focused on historic resources near or surrounding the location of this variant. Notable new context considered with this variant is the Old Oakland API with numerous historic architectural resources and Interstate 880 for example. The relevant characteristics of the expanded scope implications of the expanded study area are discussed under each environmental topic below, since it varies by topic.

The Aerial Gondola Variant is in a location that contains numerous historic architectural resources and, as a result, the study area used for the proposed Project analyzed in Chapter 4 was expanded to include a half-block radius to the east and west of Washington Street from the Oakland-Alameda Estuary (Estuary) to 10th Street. This encompasses one-half of each of 20 city blocks (see Figure 5-20). Within this study area there are the following identified historic resources, listed here from north to south:⁸

- Old Oakland API (17 contributing buildings in the study area)
- 480 4th Street (former County Morgue)
- West Waterfront ASI (9 contributing buildings in the study area)
- 480 3rd Street (Western Pacific Railroad Depot) (individual resource and contributor to the Lower Broadway ASI)

In total, the aerial gondola study area encompasses 28 historic resources. (See Appendix CUL-1 for more information regarding the historic resources included in the Aerial Gondola Variant study area.)

From the Convention Center Station to Interstate 880, the gondola would run through the middle of the Old Oakland API. From Interstate 880 to the Jack London Square Station, the aerial gondola would pass by two individual historic resources – 480 4th Street (former County Morgue) and 480 3rd Street (Western Pacific Railroad Depot) – and through the West Waterfront ASI. The northern gondola station is located at the northern boundary of Old Oakland API and will extend up to one-half block into the API along Washington Street. The central tower is located adjacent to 480 4th Street. No historic resources are adjacent to the southern gondola station.

Old Oakland API

The Old Oakland API is also shown in Figure 5-20 and includes nearly six city blocks fronting Washington Street from 7th to 10th streets. First designated in 1983, the district contains 30 contributing buildings built between 1864 and the early 1920s. All of the contributing buildings have been rehabilitated since their initial recordation in the 1970s, and many have been

⁸ Areas of Secondary Importance (ASI) are areas of local historical interest that are not automatically considered historical resources for the purposes of CEQA. However, the City of Oakland has chosen, out of an abundance of caution, to treat the West Waterfront ASI and the Lower Broadway ASI as historical resources for the purposes of this CEQA analysis. Only those contributors within the Variant Study Area boundaries are listed above.

rehabilitated since 2000. They range from one to four stories in height and are a mix of commercial and retail types historically and currently used for hotel, restaurants, and retail businesses. The Aerial Gondola Variant Study Area encompasses all of the API buildings facing Washington Street, as well as four buildings located on cross streets and within a half-block of Washington Street (see Figure 5-20.)

Within the API, three buildings are individually listed on the National Register and 10 are City of Oakland Landmarks. The Old Oakland API is also recognized as a National Register District designated through a resource survey, and the entire district is zoned S-7.⁹ The 17 contributing buildings that fall within the Aerial Gondola Variant study area are as follows (also see Figure 4.4-1):

- 518-524 7th Street
- 489 8th Street
- 509-513 8th Street
- 512 8th Street (Landmark)
- 483 9th Street (Landmark)
- 538 9th Street (individually listed on the National Register)
- 493 10th Street
- 717-719 Washington Street
- 718-726 Washington Street (Landmark)
- 725 Washington Street (individually listed on the National Register, Landmark)
- 727-735 Washington Street (Landmark)
- 736 Washington Street
- 801 Washington Street (individually listed on the National Register, Landmark)
- 809-815 Washington Street (Landmark)
- 826 Washington Street (Landmark)
- 827 Washington Street (Landmark)
- 902 Washington Street (Landmark)

The Old Oakland API is architecturally and historically significant as an intact, late-19th-century commercial district that once served as the primary commercial center for the City of Oakland. The district reflects the wealth and commerce that came to Oakland after it became the western terminus for the transcontinental railroad in 1869. “The Old Oakland district is the surviving downtown commercial center of the 1870s and 1880s, with additions made in the early decades of the 20th century when the commercial heart had moved farther north but auxiliary commercial functions still attracted investment money” (OCHS, 1984).

The district is characterized by:

⁹ The S-7 zoning designation is a Preservation Combining Zone. It is a zoning overlay that is “intended to preserve and enhance the cultural, educational, aesthetic, environmental, and economic value of structures, other physical facilities, sites, and areas of special importance due to historical association, basic architectural merit, the embodiment of a style or special type of construction, or other special character, interest, or value and is typically appropriate to selected older locations in the City” (Oakland Planning Code Section 17.84.010).

- Rectangular-plan commercial block buildings ranging from one to four stories in height;
- Street frontages with direct access to commercial spaces;
- Predominance of Italianate-style architectural details including heavy, bracketed cornices; paneled friezes; bay windows; elaborate door and window trims, and strong horizontal design elements;
- Two-story, cast iron and plate glass commercial fronts; and
- Brick and wood-frame construction.

The district is pedestrian focused, with narrow (two-lane) city streets. An open, below-grade promenade stretches along the 9th Street façade of the Nicholl Block (902 Washington Street) and street trees line Washington Street between 8th and 10th streets. The scale of the district is smaller than the adjacent Downtown Oakland Historic District and is more characteristic of late 19th century small city downtown design than the larger, more open development to the north and east.

Description of Aerial Gondola Variant Elements within the Old Oakland API

The Aerial Gondola Variant would run down Washington Street, through the central corridor of the Old Oakland API. At the intersection of 10th and Washington streets, a new station would be built over the roadway. Both of the design options consist of a platform elevated 58 feet above Washington Street, supported on piers near the street curb, as discussed in the *Description* above.

The Option 1 Station design would sit over and level to the top floor of the Convention Center parking structure. The bulk of the station would be located over the northern half of 10th Street, including the sidewalk along the Convention Center. The platform would sit 58 feet above the street and extend approximately 115 feet from the Convention Center façade down Washington Street along the centerline of the road. With this option, there would be approximately 20 feet of clearance between the east and west edges of the platform and the facades of adjacent buildings along Washington Street, and a minimum 20 feet of clearance between the platform and the facades of adjacent buildings along 10th Street (see Figures 5-15a and 15b).

The Option 2 Station design would be independent of the Convention Center. The bulk of this design would be located over the full width of 10th Street, including the flanking sidewalks. The platform would sit 58 feet above the street and extends approximately 128 feet from the Convention Center façade down Washington Street along the centerline of the road. With this option, there would be approximately 20 feet of clearance between the east and west edges of the platform and the facades of adjacent buildings along Washington Street, and less than 5 feet clearance between the platform and the facades of adjacent buildings along 10th Street (see Figure 5-16).

After exiting the station, gondola units would travel above Washington Street, through the API, with a ropeline height of 80-106 feet so that the bottom of the gondola would travel at approximately 60-90 feet above the street. The central tower would be located outside of the Old Oakland API and is discussed further below.

Alameda County Health Services Campus

The block bounded by 4th and 5th streets between Washington Street and Broadway has been owned by Alameda County since at least 1875 when the fourth Alameda County Courthouse opened its doors in this location. Currently, it is occupied by three county-owned buildings: the former Alameda County Courthouse Annex/Morgue (1928), the Alameda County Health Services Building (1960), and the Alameda County Welfare Building (1961). Of these, one building – the former county morgue at 480 4th Street – had been previously surveyed and given an OCHS rating of C3. While this does not qualify it as a CEQA resource, further analysis by ESA found the building potentially eligible for listing on the California Register. (See Appendix CUL-1 for an evaluation of the Alameda County Health Services Campus buildings.) The City of Oakland has conservatively chosen to consider the property as a historic resource for the purposes of CEQA.

The central tower of the gondola would be located on Washington Street, facing the western elevation of 480 4th Street, and would consist of four piers centered approximately at the current street curb. At their base, the piers will be 72 inches in diameter, tapering as they reach their ultimate height 230 feet overhead. Gondola cars would reach their maximum height at the Alameda County Health Services Campus, maintaining a ground clearance of over 150 feet.

West Waterfront ASI

The West Waterfront ASI is a visually distinctive early-20th-century industrial district of approximately 21 buildings on 19 assessor's parcels, on all or portions of 4 blocks between 2nd and 4th streets and Jefferson Street and Broadway. The West Waterfront ASI is approximately centered at 3rd Street between Washington and Clay streets. the AerialAerialAerial Gondola Variant Study Area encompasses all the West Waterfront ASI buildings facing Washington Street, as well as two buildings located on cross streets but within a half block of Washington Street (see Figure 4.4-1).

Areas of Secondary Importance (ASI) are districts of local interest. As a conservative measure, this EIR assumes the West Waterfront ASI to be a historical resource per CEQA for the purposes of analyzing impacts resulting from the Aerial Gondola Variant. Buildings within the West Waterfront ASI are generally one-and two stories in height, rectangular in plan with shaped parapets, truss roofs, and have vehicular entries and/or loading bays. Exteriors are primarily constructed of stucco, brick, or concrete masonry with metal sash windows. The area is low-scale industrial and commercial with various transportation elements at the edges (railroads, BART, and freeway.) The West Waterfront ASI was originally identified in 1985 and reconfirmed in 1996. (See Appendix CUL-1 for more information regarding the West Waterfront ASI.)

The nine contributing buildings to the West Waterfront ASI that fall within the Aerial Gondola Variant study area (see Figure 5-20) are as follows:

- 522 2nd Street
- 520 3rd Street
- 475 4th Street

- 315 Washington Street
- 301 Washington Street
- 380 Washington Street
- 221 Washington Street (Parker Electric MFG/Bay City Iron Works machine shop)
- 215 Washington Street (Freschi Box Company Warehouse)
- 201 Washington Street/508 2nd Street (Fat Lady Restaurant)

Significant Features of the West Waterfront ASI

The West Waterfront ASI is noteworthy primarily for its concentration of early-20th-century industrial buildings and its proximity to transportation infrastructure that gave rise to this industrial district. No one architectural style dominates, and yet all buildings in the ASI are unified by the following character-defining features:

- Low scale ranging from one- to three-stories;
- Prominence of vehicle entry door and/or loading bays;
- Metal windows, both original and replacements;
- Stepped parapets;
- Arched roofs with skylights for interior daylighting;
- Zero street setbacks;
- Simplicity of design and decoration, largely utilitarian in appearance;
- Brick, concrete, or stucco finishes.

The West Waterfront ASI historically had the Western Pacific railroad tracks running along 3rd Street, with the Western Pacific Railroad Depot located on 3rd Street, just outside of the ASI boundaries. Currently there are railroad tracks along Embarcadero West (south), BART tracks underground near 5th Street (north), and the I-880 freeway (north) within a one-block radius.

Description of Aerial Gondola Variant Elements within the West Waterfront ASI

The Aerial Gondola Variant would run down Washington Street, with the ropeline passing through a portion of the West Waterfront ASI. None of the Aerial Gondola Variant elements (stations or tower) would be located at ground level within the ASI. The central tower would be located approximately ¼ block north of the West Waterfront ASI boundary along 4th Street and the Jack London Station would be located at the foot of Washington Street, one block south. Through the ASI, the ropeline would run at a height of approximately 100 feet at 4th Street down to a height of approximately 70 feet at 2nd Street. The bottom of the gondola cars would run at a height of approximately 80 feet at 4th Street to 50 feet at 2nd Street. The tallest ASI contributing building within the Aerial Gondola Variant Study is the Parker Electric MFG building at 221 Washington Street (at 3rd Street). This structure stands approximately 40 feet tall, well below both the ropeline and the bottom of the gondola cars at this location.

Western Pacific Railroad Depot (480 3rd Street) – City Landmark

The Aerial Gondola Variant would run above the western (secondary) façade of the Western Pacific Railroad Depot, along Washington Street. The Western Pacific Railroad Depot was constructed in 1909. It is a one-story, irregular E-plan concrete building. Its spine and primary façade face 3rd Street with one wing of the building facing Washington. It was the first city

landmark, designated on July 9, 1974. It has an Oakland Cultural Heritage Survey (OCHS) rating of A2+, one of the highest possible architectural ratings. It is significant for its association with railroad transportation in the region and as a symbol of the city regaining control of the waterfront after nearly a half-century of legal disputes with the Southern Pacific Railroad. The arrival of the first train to the depot on August 22, 1910, is seen as the stimulating event for 20th-century industrial development of the Estuary.

As well as being a designated City of Oakland Landmark (an individual resource), 480 3rd Street is also a contributor to the Lower Broadway ASI. 480 3rd Street is the only parcel within the Lower Broadway ASI that also falls within the Aerial Gondola Variant Study Area because it is the only Lower Broadway ASI parcel that fronts Washington Street. The remainder of the ASI contributors face Broadway and do not have direct views of the ropeline or passing gondola cars. They all have at least one intervening building or structure that blocks or filters views toward Washington Street. Therefore, 480 3rd Street is considered as an individual resource (City Landmark) for the purposes of this CEQA analysis and impacts on the Lower Broadway ASI are not discussed further.

The character-defining features of the Western Pacific Railroad Depot include:

- Elevations with varying setbacks;
- Open arcade along 3rd Street;
- Ticket booth;
- Arched, multi-light windows at the east end of the 3rd Street façade and the south end of the southeast elevation;
- Reinforced concrete construction;
- Prominent entablature comprised of a denticulated sheet metal cornice and blank frieze panels; and
- Molded parapet at the roofline.

(See Appendix CUL-1 for more information regarding this resource.)

No Aerial Gondola Variant elements would be located immediately adjacent to the Western Pacific Railroad Depot at ground level. The ropeline and gondola cars would pass overhead along Washington Street at approximate heights of 90 and 70 feet, respectively.

5.2.3 Impacts of the Aerial Gondola Variant

This section presents the Aerial Gondola Variant impacts and mitigation measures with a focus on those that are different from those identified for the proposed Project without this variant. Where impacts and mitigation measures would remain as described in Chapter 4 with or without the variant, a brief explanation as to why is provided.

Aesthetics, Shadow and Wind

Developing the Aerial Gondola Variant would result in similar *aesthetics, shadow and wind impacts, improvement measures, and mitigation measures* as the proposed Project.

Scenic Vistas/Resources (Non-CEQA)

From the perspectives in Figure 5-8, minor long-range views of the Oakland hills are available in the background, mid-range views of the Oakland City Hall building and other downtown high-rise buildings are available, but no panoramic views of the downtown Oakland skyline or the bay are available. It should be noted that the visual simulations in this analysis do not include architectural details that would be designed further along in the development process, and thus these simulations represent a worst-case scenario. As described in the Oakland General Plan, views of the downtown Oakland skyline, Oakland hills, and the Bay are scenic views and scenic resources that should be protected.

The viewpoint of **Figure 5-21, Visual Simulation of the Jack London Square Gondola Station**, is from the perspective of a pedestrian located approximately 20 feet south of the intersection of Washington Street and Water Street. Development of the Jack London Square gondola station would block views of some of the taller buildings downtown, and would largely obstruct views of Oakland City Hall, but portions of the Oakland hills and a small portion of the Oakland City Hall building would still be available. Moreover, similar views as those that currently exist at this viewpoint would remain available from locations just a few feet away.

As shown in **Figure 5-22, Visual Simulation of the Convention Center Station**, there are no long-range views of scenic resources available in this view from the south side of the Convention Center, although the historic buildings of Old Oakland line both sides of Washington Street. The Convention Center Station would obstruct views of the Oakland Convention Center, but the station would not degrade short-range views of the historic Old Oakland district given the station's relatively limited protrusion into the public right-of-way compared to the overall scale of the district.

From the view in Figure 5-21, the existing view corridor along Washington Street would be substantially changed due to development of the Jack London Square Station, which would occupy most of the skyline when looking toward downtown. While this view would be substantially different with implementation of this variant, the existing view is not considered a particularly scenic view because it does not afford a substantially unique, rare, or unobstructed view of a scenic resource. In addition, it should be noted that the gondola, if implemented, would provide panoramic views of the downtown Oakland skyline, Oakland hills, the Bay, and San Francisco from up to approximately 200 feet above ground. Views of these scenic resources would be available to the public while traveling on the gondola. Therefore, this variant, in combination with the proposed Project, would not have a substantial adverse effect on a scenic vista or substantially damage scenic resources. This variant would result in a *similar less-than-significant impact* related to scenic vistas and scenic resources if the proposed Project was subject to a review of aesthetics under CEQA. No new or changed impacts or mitigation measures would be required for aesthetics.

Figure 5-21 Visual Simulation of the Jack London Square Gondola Station

Figure 5-22, Visual Simulation of the Convention Center Station

Visual Character/Visual Quality (Non-CEQA)

The existing visual character of the area between Water Street and the Oakland Convention Center along Washington Street is generally comprised of low- to mid-rise commercial buildings with stucco and masonry facades. The Convention Center is adjacent to Old Oakland, which conveys a historical feeling that is noticeable to pedestrians and motorists traveling on Washington Street between 7th to 10th Streets. Because the area traverses the area between the waterfront and downtown Oakland, and is bifurcated by the I-880 Freeway, it generally lacks a high degree of visual definition or coherence beyond that of a mid-rise commercial-oriented district, except for the areas within the Old Oakland district. To the extent this variant would affect the historical significance of the Old Oakland district, this impact is discussed under *Cultural and Tribal Cultural Resources* below. This section analyzes whether the Aerial Gondola Variant would substantially degrade the visual character or quality of the site and its surroundings.

Development of the gondola would change the character of the area by adding a new vertical and horizontal feature overhead, contrasting with the low- to mid-rise commercial character of the area. The gondola stations would become prominent features of the visual landscape at both ends of the gondola alignment. The gondola could be noticeable to pedestrians between Embarcadero West and 9th Street (eight city blocks) because the gondolas would be suspended between 100 to 200 feet overhead and would be moving approximately 11 mph, increasing their visibility. However, the visual changes associated with the gondola would be primarily due to the stations at both ends of the alignment, in the vicinity of the Jack London Square Station and the Convention Center Station, and the tower at 4th and Washington Street.

Since the gondola stations are within public rights of way, a Major Encroachment Permit would be required from the City. The gondola stations would be subject to review by the Landmarks Preservation Advisory Board, prior to City Council action on a Major Encroachment Permit. Additionally, given the sensitivity of the Convention Center Station within the context of the Old Oakland API, design review is recommended prior to City Council action on the Major Encroachment Permit for the Project with the Aerial Gondola Variant. As discussed in Section 5.2.4 below, Mitigation Measure CUL-7 (Convention Center Station Contextual Design Review) would require that the Convention Center Station be subject to the City's design review procedures to ensure development of a sensitive and responsive contextual design for the Convention Center gondola station with the Old Oakland API. During this time, the project design could be subject to refinement to ensure the City's applicable design review criteria are followed, including those specific to the historic design context, where applicable. Based on preliminary plans, it is anticipated that there would be no major conflicts between the proposed design of the Project and the Design Review Criteria.

Therefore, the ***overall impact of this variant related to aesthetics would be the same*** as the impact of the proposed Project, which would be less than significant if the proposed Project was subject to a review of aesthetics under CEQA.

Light/Glare (Non-CEQA)

As described in the Lighting Technical Report (see Appendix AES), the Aerial Gondola Variant would not substantially increase spill light or glare on game nights or non-game nights, before businesses are anticipated to be closed. However, after businesses are anticipated to be closed, lighting would exceed spill light thresholds, but would not exceed glare thresholds. Receptor locations 1A, 5B, 5C, 7, and 7A (see Section 4.1, *Aesthetics, Shadow, and Wind* for a map showing receptor locations) are primarily influenced by light and glare from the Aerial Gondola Variant. Since light and glare at these receptor locations are also influenced by lighting from the proposed Project, albeit to a lesser extent, they are listed in Table 4.1-3 and referenced here.

As shown in Table 4.1-3, the Aerial Gondola Variant would result in spill light increases of between 0.5 and 1.9 lux at receptor location 5B on non-game nights and game nights, respectively, 0.1 lux at receptor location 5C on game nights, 0.1 lux on game nights at receptor location 7, and would not result in any increase in spill light at receptor location 7A. These values are below the thresholds discussed in Section 4.1 and thus would result in less-than-significant impacts at these locations if the proposed Project were subject to an aesthetics analysis under CEQA.

At receptor location 1A, spill light on non-game nights post-curfew, or after business hours, would increase by 6.2 and 6.1 lux under Phase 1 and full buildout, respectively, which is greater than the threshold of 5 lux. This represents a potentially significant increase in spill light. Improvement Measure AES-2 would also apply to this variant, which would reduce light impacts. However, light impacts to receptors under this variant would be substantial, similar to the proposed Project scenario, which would result in the *same significant and unavoidable light and glare impacts* if the proposed Project was subject to a review of aesthetics under CEQA.

Therefore, this variant, in combination with the proposed Project, would have the *same significant and unavoidable light and glare impacts* but in different locations if the proposed Project was subject to a review of aesthetics under CEQA.

Shadow

The ferry lawn at the foot of Washington Street (between Washington and Clay Streets) and the “square” at Water Street and the foot of Broadway, are existing open spaces located in proximity to this this variant, either of which are affected by substantial shadow from the Jack London Square Stations in particular at any times and durations through the year to cast a significant effect; see **Figure 5-23, Shadow Diagrams – Existing and Aerial Gondola Variant Jack London Square Station**.

There are no shadow sensitive open spaces near the Convention Center Station or the Gondola Tower; year-round shadow cast by this station is modeled in **Figure 5-24a, Shadow Diagrams – Existing and Aerial Gondola Variant Convention Center Gondola Station (Option 1)** and **Figure 5-24b, Shadow Diagrams – Existing and Aerial Gondola Variant Convention Center Gondola Station (Option 2)**, and these demonstrate the limited shadow effects of this station.

However, as described under Section 5.2.4, *Cultural and Tribal Cultural Resources* below, the gondola would run through the middle of the Old Oakland district and would cross above, or be visible from a total of 28 historic structures. In addition, the Convention Center Station would be located approximately 250 feet from Swan's Market (538 9th Street), which contains solar collectors on the roof.

While this variant would include two new stations, approximately 70 feet and nearly 100 feet tall for the Jack London Square Station and the Convention Center Station, respectively, and a new 230-foot tower along Washington Street, new shadow cast by these structures would not reach the solar collectors at 538 9th Street at any point during the year. Therefore, solar collectors would not be impacted such that the function of a building with solar collectors would be substantially impaired.

While access to light is not typically an important characteristic of most historic buildings, it may be of historic places of worship where the light, specifically the light through stained glass windows, conveys its historical significance. None of the historic structures require access to direct sunlight as a defining characteristic of its historical significance due the lack of stained glass or other elements that require access to light, therefore, historic structures would not be adversely impacted by new shadow from the gondola structures. Therefore, the overall impact of this variant related to shadow, if the proposed Project was subject to a review of aesthetics under CEQA, would be the *same as the impact of the proposed Project, which would be less than significant*.

Wind

A building that stands alone or is much taller than the surrounding buildings can intercept and redirect winds that might otherwise flow overhead and bring them down the vertical face of the building to ground level, where they create ground-level wind and turbulence. The gondola stations would be largely porous at ground level, and would not be substantially taller than surrounding buildings. These characteristics would limit the potential for the stations to intercept strong winds and redirect them to ground level. In addition, the tower and gondola and ropeway system are slim structures that would not be substantial enough to have a noticeable effect on winds. The Convention Center Station is anticipated to be nearly 100 feet tall; the Jack London Square Station would be up to approximately 70 feet tall. If the Convention Center Station is ultimately designed to be 100 feet or taller, it would be subject to Mitigation Measure AES-1 (Wind Impact Analysis and Mitigation for Buildings 100 Feet or Greater in Height). While Mitigation Measure AES-1 would reduce the severity of wind impacts, it cannot be stated with certainty whether Mitigation Measure AES-1 would reduce impacts to a less-than-significant level. As a result, the impact of the proposed Project with the Aerial Gondola Variant related to hazardous wind conditions would be significant and unavoidable with mitigation. Since it was determined that the proposed Project would have a significant and unavoidable impact related to wind, the proposed Project with this variant would *likewise have a significant and unavoidable impact* due to the possible height of the Convention Center Station over 100-feet, albeit likely no worse than that of the proposed Project.

Figure 5-23, Shadow of Jack London Square Station.

Figure 5-24a, Shadow of Convention Center Gondola Station (Option 1)

Figure 5-24b, Shadow of Convention Center Gondola Station (Option 2)

Cumulative

As described in Section 4.1, *Aesthetics*, development of cumulative projects, including development of the proposed Project, would result in incremental changes to aesthetics, light, glare, wind and shadow in the area. Cumulative projects would have a less-than-significant impact with respect to aesthetics because all substantial projects with potential to change the visual landscape would undergo design review by the City Planning Commission to determine their consistency with the General Plan. Figure 5-8 (previously presented) depicts the cumulative development simulation, where the Aerial Gondola Variant is not visible.

Figures 5-25, Cumulative Shadow – Jack London Square Station and 5-26, Cumulative Shadow – Convention Center Station, show the year-round shadow effects cast by the proposed Project, the variants, and other cumulative development. With respect to shadow, there are no public parks or quasi-public spaces other than the ones analyzed for the proposed Project; the ferry lawn and Jack London plaza at the foot of Broadway are situated where they would not be cast adverse prolonged shadow. As discussed above, the historic resources in the cumulative projects area are not particularly light-sensitive or light-dependent due the lack of stained glass or other elements that require access to light. Therefore, increased shadow on these resources would not substantially impair the resource’s historic significance such that it would no longer be eligible for listing on a national, state, or local register of historic places. The cumulative projects with the proposed Project and this variant would result in the same less-than-significant cumulative impact as described in Section 4.1 for aesthetics and shadow, if the proposed Project was subject to a review of aesthetics under CEQA.

In terms of light and glare, the proposed Project’s contribution to a significant and unavoidable cumulative impact was determined to be cumulatively considerable. Improvement Measure AES-2 would also apply to this variant, and this measure would reduce light/glare impacts. Nevertheless, because this variant would increase spill light and glare under the cumulative scenario, the proposed Project with this variant would likewise result in a considerable contribution to a significant and unavoidable cumulative light and glare impact, if the proposed Project was subject to a review of aesthetics under CEQA.

In terms of wind effects, the proposed Project’s contribution to a significant and unavoidable cumulative impact was determined to be cumulatively considerable. This variant would include the Convention Center Station, which could be nearly 100 feet tall and thus would be subject to Mitigation Measure AES-1. While this variant by itself may not have a noticeable impact to localized pedestrian wind patterns, the proposed Project without the variant would have a considerable contribution to a significant and unavoidable cumulative impact, as described in Section 4.1-1. Therefore, the cumulative impact with the proposed Project and this variant would also be significant and unavoidable because of the height of the Convention Center Station.

No new or changed impacts or mitigation measures for this topic would be required with this variant.

Figure 5-25 Shadow Diagrams – Existing, Aerial Gondola Variant Jack London Square Station, and Cumulative JLS Station

Figure 5-26 Shadow Diagrams – Existing, Aerial Gondola Variant Convention Center Station, and Cumulative

Air Quality

As discussed above, the Aerial Gondola Variant includes full buildout of the proposed Project as well as the construction and operation of the Aerial Gondola. Therefore, construction and operation of the Aerial Gondola variant will result in only slightly different emissions than the Project. These emissions differences are due to additional construction activity associated with building the Gondola and reduced criteria pollutant emissions due to shifting on-road vehicle trips to the electrically-powered Gondola as a mass transit option for people going to the Project site on a daily basis and for events. However, although the Aerial Gondola Variant results in slightly different emissions and health risks, the impacts are the ***same air quality impacts and mitigation measures*** identified for the proposed Project.

The gondola would transport people from downtown Oakland near the 12th Street BART Station and Oakland Convention Center to Jack London Square at the foot of Washington Street. This variant could be implemented with the Project in Phase 1 (by opening day) or before Full Buildout.

Construction Impacts

Construction emissions were estimated for activities associated with building the Gondola. Construction would occur from 2021 to 2023 and involve additional off-road construction equipment activity and on-road construction worker and truck trips. All other construction activities associated with ballpark and non-ballpark building construction would remain the same as the Project. Details of the construction assumptions are presented in Appendix AIR.

Because construction for the Aerial Gondola Variant includes construction of the full buildout Project, plus additional construction associated with the gondola itself, unmitigated construction emissions of ROG, NO_x, and PM₁₀ emissions would exceed thresholds in multiple years, similar to the Project. As such, the same mitigation measures as for the Project would be required for the Aerial Gondola Variant. These include Mitigation Measures AIR-1a (Dust Controls), AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), and AIR-1d (Low-VOC Architectural Coatings during Construction).

Table 5-12 presents average daily mitigated construction-related criteria pollutant emissions under the Aerial Gondola Variant with implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and AIR-1d (Low-VOC Architectural Coatings during Construction). As shown in Table 5-12, the combined average daily emissions with implementation of Mitigation Measure AIR-1c and AIR-1d would exceed the City's significance threshold in 2021 for NO_x with maximum average daily emissions of 91.2 lbs/day. This exceedance is slightly greater than the Project; however, this impact would ***remain significant and unavoidable with mitigation***, as identified for the Project without this variant.

TABLE 5-12
AVERAGE DAILY MITIGATED CONSTRUCTION EMISSIONS BY POLLUTANT AND YEAR FOR THE AERIAL GONDOLA
VARIANT (PROJECT + GONDOLA)

Year	Average Daily Emissions (lbs/day) ^{a,b}			
	ROG	NOX	PM10 (exhaust) ^c	PM2.5 (exhaust) ^c
Significance Threshold	54	54	82	54
2020	1.7	14.4	0.5	0.5
2021	10.4	91.2	1.8	1.7
2022	29.5	47.3	0.9	0.9
2023	24.3	22.9	0.5	0.4
2024	3.5	42.1	0.6	0.5
2025	25.8	31.7	0.5	0.4
2026	45.2	36.3	0.6	0.5
2027	45.0	38.5	0.5	0.5

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter that is 10 microns or less in diameter; PM_{2.5} = particulate matter that is 2.5 microns or less in diameter;

^a
^b

Bold values = threshold exceedance

Mitigation Measures included in emissions shown in this table include Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), modeled as Tier 4 engines on all off-road equipment (as available), and Mitigation Measure AIR-1d (Low-VOC Architectural Coatings during Construction), modeled as super-compliant VOC coatings with 10 grams VOC per liter for all interior coatings. This table also includes construction activities associated with construction of the pedestrian and bicycle overcrossing and other off-site transportation improvements, which is required as mitigation in the Transportation section.

^c

Only exhaust emissions of PM₁₀ and PM_{2.5} emissions are shown, because fugitive dust emissions are addressed through best management practices as required Mitigation Measure AIR-1a (Dust Controls).

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020.

Operational Impacts, and Combined Construction and Operational Impacts

Since all of the square footage of the Project is being preserved in the Aerial Gondola Variant, the land uses, activities, attendance and population data are the same as the Project. Additionally, mobile construction trips associated with hauling, vendor deliveries, and workers would also remain the same. However, the Aerial Gondola variant would result in avoided criteria pollutant and GHG emissions associated with a reduction of vehicle miles traveled for people using the gondola as a mass transit option instead of on-road vehicles. Between 4% and 10% of non-delivery vehicle trips are assumed to be replaced by gondola trips, with the percentage varying based on land use scenario.¹⁰

The Aerial Gondola variant would also result in new emissions associated with the operation of generators at three locations: the Jack London Square Station, 10th Street Station, and the Tower. Generator emissions were calculated using the same methodology as for the Project.

¹⁰ SCJ Alliance Consulting Services. 2019. Oakland Gondola Electric Service. Technical Memorandum to Noah Rosen, Oakland A's, et. al., from James K Bunch. April 3.

Based on the above assumptions, during full buildout operations, the Aerial Gondola Variant would result in unmitigated reductions in ROG of 6.4 pounds per day and 1.2 tons per year, reductions in NO_x of 17.2 pounds per day and 3.1 tons per year, reductions in PM₁₀ of 15.5 pounds per day and 2.8 tons per year, and reductions in PM_{2.5} of 3.5 pounds per day and 0.6 tons per year when compared to Project full buildout operations in 2027. This represents a 3 percent reduction in ROG, an 8 percent reduction in NO_x, an 11 percent reduction in PM₁₀, and a 10 percent reduction in PM_{2.5}. It should be noted that these reductions were not estimated for Phase 1 operations from 2023-2026; only full buildout emissions in 2027 and 2028 include these reductions.

Table 5-13 summarizes total net new annual and average daily unmitigated emissions by year from 2023 through 2028 under the Aerial Gondola Variant, and compares Variant emissions with the City of Oakland significance thresholds. Similar to the Project, partial buildout Aerial Gondola Variant operational emissions of ROG and NO_x would exceed the significance thresholds in 2027 and full buildout operational emissions of ROG, NO_x, and PM₁₀ would exceed the significance thresholds in 2028. As such, the same mitigation measures as for the Project would be required for the Aerial Gondola Variant. These include Mitigation Measures AIR-2a (Use Low and Super-compliant VOC Architectural Coatings in Maintaining Buildings through Covenants, Conditions, and Restrictions), AIR-2b (Promote use of Green Consumer Products), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), and AIR-2e (Criteria Pollutant Mitigation Plan).

Table 5-14 below presents total net new annual and average daily combined mitigated construction and mitigated operational emissions under the Aerial Gondola Variant during the years when construction and operations overlap. This table presents overlapping construction emissions with Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and with Mitigation Measure AIR-1d (Low-VOC Architectural Coatings during Construction). As shown in Table 5-10, mitigated emissions would remain above the significance thresholds despite implementation of mitigation measures AIR-2a, AIR-2b, AIR-2d, and AIR-2e. However, under the Aerial Gondola Variant, emissions of NO_x would be notably reduced at full buildout in 2027-2028, although emissions would still exceed the significance thresholds in 2024-2028 similar to the Project. Similar to the Project, emissions of NO_x for the Variant would exceed the significance thresholds in all years from 2024 through 2028, ROG for the Variant would exceed the significance thresholds in all years from 2025 through 2028, emissions of PM₁₀ would exceed the significance thresholds in 2028, and emissions of PM_{2.5} would not exceed the significance thresholds in any year. These exceedances are less than the Project due to the reduction in operational mobile source emissions. While the variant's impact would be less than the proposed Project, it would ***remain significant and unavoidable with mitigation***, as identified for the Project without this variant.

TABLE 5-13
TOTAL UNMITIGATED ANNUAL AND AVERAGE DAILY OPERATIONAL EMISSIONS BY YEAR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA)

Year	Average Daily Emissions (lbs/day) ^{a,b}				Total Annual Emissions (tons/year) ^{a,b}			
	ROG	NOX	PM10	PM2.5	ROG	NOX	PM10	PM2.5
Significance Threshold	54	54	82	54	10	10	15	10
A's Related Existing Conditions (2018) ^c	32.9	19.0	20.6	4.7	6.0	3.5	3.8	0.9
2023								
Phase 1 Operational Emissions ^{d,e}	43.9	30.2	25.8	6.7	8.0	5.5	4.7	1.2
Net New Emissions ^f	11.0	11.2	5.1	2.0	2.0	2.0	0.9	0.4
2024 – 2026 ^g								
Phase 1 Operational Emissions ^{d,e}	80.5	82.5	49.9	13.2	14.7	15.1	9.1	2.4
Net New Emissions ^f	47.6	63.6	29.3	8.4	8.7	11.6	5.3	1.5
2027								
Full Buildout Operational Emissions ^{d,e}	113.7	107.0	73.3	18.2	20.7	19.5	13.4	3.3
Net New Emissions ^f	80.8	88.0	52.7	13.5	14.7	16.1	9.6	2.5
2028								
Full Buildout Operational Emissions ^{e,h}	194.5	200.2	130.6	32.7	35.5	36.5	23.8	6.0
Net New Emissions ^f	161.6	181.3	110.0	28.0	29.5	33.1	20.1	5.1
Maximum Net New Operational Emissions	161.6	181.3	110.0	28.0	29.5	33.1	20.1	5.1

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter that is 10 microns or less in diameter; PM_{2.5} = particulate matter that is 2.5 microns or less in diameter;

^a **Bold values** = threshold exceedance for net new emissions

^b Due to rounding, emissions from individual sectors may not add up to total.

^c Emissions for A's-related existing conditions are presented in Table 4.2-8. These emissions only represent emissions associated with A's operations and ballgames that would be relocated to the new ballpark. Only emissions for A's-related existing conditions were subtracted from Variant emissions to determine net new emissions associated with the Variant.

^d Operational emissions are scaled for partial years of operation in 2023 and 2027 based on the number of days of full operations for those years compared to 365 total days per year (30 days for the Project and 274 days for the Aerial Gondola Variant in 2023 and 120 days for the Project in 2027). For 2023, ballpark emissions are not scaled as the ballpark is operational at the start of Phase 1. Only Phase 1 non-ballpark land use emissions are scaled by the ratio of 30 days to 365 days. Mobile source emission reductions associated with the Aerial Gondola Variant were not included for Phase 1 operations from 2023-2026; only full buildout emissions in 2027 and 2028 include the mobile source reductions.

^e Mobile source emissions include the 20% trip reduction required by AB 734 and implementation of on- and off-site transportation improvements and mitigation measures included in the Transportation section. For emissions without the 20% trip reduction, refer to Appendix AIR, Air Quality Supporting Information.

^f Net new emissions represent Project and Variant construction *plus* Project and Variant operational emissions *minus* A's-related existing emissions.

^g Operational emissions are anticipated to be the same during 2024-2026 when Phase 1 is operational and before full Project buildout occurs.

^h 2028 is the first full year (365 days) of full Project buildout operations and associated emissions.

SOURCE: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020

TABLE 5-14
TOTAL ANNUAL AND AVERAGE DAILY COMBINED MITIGATED CONSTRUCTION AND
MITIGATED OPERATIONAL EMISSIONS BY YEAR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA)

Year	Average Daily Emissions (lbs/day) ^{a,b}				Total Annual Emissions (tons/year) ^{a,b}			
	ROG	NOX	PM10	PM2.5	ROG	NOX	PM10	PM2.5
Significance Threshold	54	54	82	54	10	10	15	10
A's-Related Existing Conditions ^c	32.9	19.0	20.6	4.7	6.0	3.5	3.8	0.9
2023								
Construction ^d	24.3	22.9	0.5	0.4	3.1	2.8	0.05	0.05
Phase 1 Operations ^{e,t}	43.0	27.2	25.7	6.6	7.8	5.0	4.7	1.2
<i>Net New Emissions^g</i>	<i>34.4</i>	<i>31.1</i>	<i>5.5</i>	<i>2.3</i>	<i>5.0</i>	<i>4.3</i>	<i>1.0</i>	<i>0.4</i>
2024								
Construction ^d	3.5	42.1	0.6	0.5	0.5	5.5	0.07	0.07
Phase 1 Operations ^e	78.5	75.5	49.6	12.9	14.3	13.8	9.1	2.4
<i>Net New Emissions^g</i>	<i>49.1</i>	98.7	29.6	8.7	8.8	15.8	5.4	1.6
2025								
Construction ^d	25.8	31.7	0.5	0.4	3.4	4.1	0.06	0.05
Phase 1 Operations ^e	78.5	75.5	49.6	12.9	14.3	13.8	9.1	2.4
<i>Net New Emissions^g</i>	71.4	88.2	29.5	8.6	11.7	14.4	5.4	1.5
2026								
Construction ^d	45.2	36.3	0.6	0.5	5.9	4.7	0.07	0.07
Phase 1 Operations ^e	78.5	75.5	49.6	12.9	14.3	13.8	9.1	2.4
<i>Net New Emissions^g</i>	90.8	92.6	29.6	8.7	14.2	15.0	5.4	1.6
2027								
Construction ^d	45.0	38.5	0.5	0.5	3.9	3.4	0.05	0.05
Full Buildout Operations ^{e,t}	110.6	96.2	72.9	17.9	20.2	17.5	13.3	3.3
<i>Net New Emissions^g</i>	122.7	115.7	52.8	13.7	18.1	17.4	9.6	2.4
2028								
Construction ^d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full Buildout Operations ^{e,h}	189.3	181.6	130.0	32.1	34.6	33.1	23.7	5.9
<i>Net New Emissions^g</i>	156.5	162.6	109.3	27.3	28.6	29.7	20.0	5.0
Maximum Net New Operational Emissions	156.5	162.6	109.3	27.3	28.6	29.7	20.0	5.0

NOTES:

lbs/day = pounds per day; ROG = reactive organic gases; NOX = oxides of nitrogen; PM10 = particulate matter that is 10 microns or less in diameter; PM2.5 = particulate matter that is 2.5 microns or less in diameter;

^a **Bold values** = threshold exceedance for net new emissions

^b Due to rounding, emissions from individual sectors may not add up to total.

^c Existing A's-related emissions are presented in Table 4.2-8.

^d Average daily construction emissions represent total annual emissions divided by 260 work days per year (with the exception of the ballpark construction emissions, which are divided by 312 work days per year to account for weekend work). Emissions include implementation of Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), and Mitigation Measure AIR-1d (Low-VOC Architectural Coatings during Construction). This table also includes construction activities associated with construction of the pedestrian and bicycle overcrossing and other off-site transportation improvements, which is required as mitigation in the Transportation section.

TABLE 5-14
TOTAL ANNUAL AND AVERAGE DAILY COMBINED MITIGATED CONSTRUCTION AND
MITIGATED OPERATIONAL EMISSIONS BY YEAR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA)

e	Average daily operational emissions represent total annual emissions divided by 365 days per year. Emissions include the 20% trip reduction required by AB 734, implementation of on- and off-site transportation improvements and mitigation measures included in the Transportation section, Mitigation Measure AIR-2a (Use Low and Super-compliant VOC Architectural Coatings in Maintaining
f	Buildings through Covenants, Conditions, and Restrictions), and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). Operational emissions are scaled for partial years of operation in 2023 and 2027 based on the number of days of full operations for those years compared to 365 total days per year (30 days for the Project and 274 days for the Aerial Gondola Variant in 2023 and 120 days for the Project in 2027). For 2023, ballpark emissions are not scaled as the ballpark is operational at the start of Phase 1. Only Phase 1 non-ballpark land use emissions are scaled by the ratio of 30 days to 365 days. Mobile source emission reductions associated with the Aerial Gondola Variant were not included for Phase 1 operations from 2023-2026; only full buildout emissions in 2027 and 2028 include the mobile source reductions.
g	Net new emissions represent Project and Variant construction <i>plus</i> Variant operational emissions <i>minus</i> A's-related existing emissions.
h	2028 is the first full year (365 days) of full Project buildout operations and associated emissions.

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020

Carbon Monoxide

The Aerial Gondola Variant would reduce mobile source emissions compared to the Project, due to a reduction of vehicle miles traveled for people using the gondola as a mass transit option instead of on-road vehicles. Therefore, the impacts and analysis for the Aerial Gondola variant associated with carbon monoxide would be the less than those discussed above for the Project. As such, development under the Aerial Gondola Variant would not be required to estimate localized CO concentrations as it would not contribute to CO concentrations exceeding CAAQS. The impact would be *less than significant and no mitigation measures are required*, same as identified for the proposed Project without this variant.

Toxic Air Contaminants

The Aerial Gondola Variant would result in reduced TAC emissions associated with mobile sources due to shifting on-road vehicle trips to the electrically-powered Gondola as a mass transit option for people going to the Project site on a daily basis and for events. This would also result in reduced health risks at both the onsite and offsite MEIR. However, this reduction in mobile source TAC emissions is not expected to materially affect the health risk results since the reduction in operational vehicle trips is less than 10,000 vehicles per day, which is the BAAQMD's recommended volume at which health risk impacts should be evaluated for roadways. Therefore, this reduction in traffic was not included in the Variant HRA.

As discussed above, the Aerial Gondola Variant would also have three emergency generators associated with its operation. TAC emissions were estimated for each generator and health risks were calculated using the same methods used for the Project. Generators were assumed to be at ground level for the Aerial Gondola. All other source parameters are consistent with those used for the Project generators. The Aerial Gondola Variant does not have other additional operational sources of TACs. .

Impacts on Existing Sensitive Receptors

Because construction of the Aerial Gondola Variant includes construction of the full buildout of the Project, plus additional construction associated with constructing the gondola, and because construction TACs drive health risks at the offsite MEIR, unmitigated cancer risk and annual

average PM_{2.5} concentrations would exceed the health risk thresholds, similar to the Project. As such, the same mitigation measures as for the Project would be required for the Aerial Gondola Variant. These include Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), and AIR-4a (Truck-Related Risk Reduction Measures – Toxic Air Contaminants).

Table 5-15 below shows the mitigated HRA results for existing off-site receptors for Scenario 1 exposure from Aerial Gondola Variant construction and operational activities taking into account the implementation of Mitigation Measure AIR-1c assuming all Tier 4 Final equipment for construction emissions (where feasible) and Mitigation Measure AIR-2c assuming all Tier 4 Final emergency generators, 20 hours of annual generator testing and maintenance, and all generator exhaust is vented at the building rooftops.

TABLE 5-15
MITIGATED EXCESS LIFETIME CANCER RISK, CHRONIC HAZARD INDEX, AND ANNUAL AVERAGE PM_{2.5}
CONCENTRATION OF THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) AT THE EXISTING OFF-SITE
MEIR

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Chronic Hazard Index ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	10.0	1.0	0.3
Scenario 1: Construction Plus Operations			
Existing Howard Terminal ^d	-2.2	-8.09E-05	-0.0006
Gondola Construction	0.04	--	--
Gondola Operations	0.071	2.42E-05	1.21E-04
Project Contribution	8.3	0.004	0.19
Total Mitigated Project + Gondola	8.4	0.004	0.19
Total Mitigated Net New Project + Gondola ^e	6.2	0.004	0.19
MEIR Location (UTM – X)	563080	563180	563180
MEIR Location (UTM – Y)	4183660	4183920	4183920
Year of Maximum Exposure ^f	n/a	2027	2027

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator; -- = no value reported.

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also assumes the 20% trip reduction requirement of AB 734 is met and includes construction activities associated with implementation of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, PM_{2.5} concentrations include exhaust, tire wear, brake wear, and road dust. PM_{2.5} concentrations at off-site receptors in Scenario 1 include contributions from multiple phases of Project construction and subsequent Project operations since 2027 includes construction and operation.

^d Existing Howard Terminal operations include truck activity at the project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the TAC emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.

^e Total mitigated net new Project + Gondola represents total Project + Gondola health risks *minus* health risks from Howard Terminal truck activity.

^f For cancer risk, the exposure is excess lifetime 30-year exposure; for non-cancer chronic HI and PM_{2.5} concentrations, this represents the year when the maximum value occurs at the MEIR.

SOURCES: Appendix AIR, *Air Quality Supporting Information*.

Therefore, similar to the Project, when accounting for mitigation measures, both cancer risk and annual average PM_{2.5} concentrations associated with the Aerial Gondola Variant would be reduced below the significance thresholds. These exceedances are slightly greater than the Project due to additional construction activity. Please refer to section 4.2 *Air Quality*, Table 4.2-13 for estimated health risks associated with TACs from the Project at the existing offsite MEIR. As such, this impact would be greater than the Project but would ***remain less than significant with mitigation***, same as identified for the proposed Project without this variant.

Impacts on New Sensitive Receptors

Because operational generator TACs for the Aerial Gondola Variant would be greater than the Project due to the additional three emergency generators associated with the Variant's operation, and because operational generator TACs drive health risks at the new onsite MEIR, unmitigated cancer risk and annual average PM_{2.5} concentration would exceed the health risk thresholds, similar to the Project. In addition, because construction for the Aerial Gondola Variant includes construction of the full buildout Project, plus additional construction associated with building the gondola, unmitigated cancer risk and annual average PM_{2.5} concentration would exceed the health risk thresholds, similar to the Project. As noted above, although operational mobile source TACs for the Aerial Gondola Variant would be less than the Project, the reduction in traffic is not expected to materially affect the health risk values at the MEIR. As such, the same mitigation measures as for the Project would be required for the Aerial Gondola Variant. These include Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-4a (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), and AIR-5a (Install MERV16 Filtration Systems).

Table 5-16 below shows the mitigated HRA results for new on-site receptors for Scenario 1 exposure from Aerial Gondola Variant construction and operational activities taking into account the implementation of Mitigation Measure AIR-1c, Mitigation Measure AIR-2c, and Mitigation Measure AIR-5a. Same as the Project, Mitigation Measure AIR-5a was assumed to reduce cancer risk, chronic HI, and PM_{2.5} concentrations by approximately 76 percent.

TABLE 5-16
MITIGATED EXCESS LIFETIME CANCER RISK, CHRONIC HAZARD INDEX, AND ANNUAL AVERAGE PM_{2.5}
CONCENTRATION OF THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) AT THE NEW ON-SITE MEIR

Scenario/Emissions Source/ Location/Year	Excess Lifetime Cancer Risk (per million) ^a	Chronic Hazard Index ^a	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	10.0	1.0	0.3
Scenario 2: Construction Plus Operations			
Gondola Construction ^d	--	--	--
Gondola Operations	0.03	7.63E-06	3.82E-05
Project Contribution	2.1	0.002	0.024
Total Mitigated Project + Gondola	2.2	0.002	0.024

TABLE 5-16 (CONTINUED)
MITIGATED EXCESS LIFETIME CANCER RISK, CHRONIC HAZARD INDEX, AND ANNUAL AVERAGE PM_{2.5}
CONCENTRATION OF THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) AT THE NEW ON-SITE MEIR

Scenario/Emissions Source/ Location/Year	Excess Lifetime Cancer Risk (per million) ^a	Chronic Hazard Index ^a	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
MEIR Location (UTM – X)	562940	563020	563020
MEIR Location (UTM – Y)	4183440	4183640	4183640
Year of Maximum Exposure ^e	n/a	2027	2027

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM – universal transverse Mercator; -- = no value reported

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), Mitigation Measure AIR-2c (Diesel Backup Generator Specifications), and Mitigation Measure AIR-5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction requirement of AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a (Dust Controls). For operations, PM_{2.5} concentrations include exhaust, tire wear, brake wear, and road dust. PM_{2.5} concentrations at on-site receptors in Scenario 2 include contributions from multiple phases of Project construction and subsequent Project operations since 2027 includes construction and operation.

^d Construction of the Aerial Gondola Variant occurs during Phase 1 of the project, before any residents move in, and so variant construction only impacts off-site receptors.

^e For cancer risk, the exposure is excess lifetime 30-year exposure; for non-cancer chronic HI and PM_{2.5} concentrations, this represents the year when the maximum value occurs at the MEIR.

SOURCES: Appendix AIR, *Air Quality Supporting Information*; Ramboll US Corporation, 2020.

Therefore, similar to the Project, when accounting for mitigation measures, both cancer risk and annual average PM_{2.5} concentrations associated with the Aerial Gondola Variant would be reduced below the significance thresholds. These health risk values are slightly greater than the Project due to increased operational TAC emissions from emergency generators. Please refer to section 4.2 *Air Quality*, Table 4.2-15 for estimated health risks associated with TACs from the Project at the existing offsite MEIR. Overall, this impact would be greater than the Project but would ***remain less than significant with mitigation***, same as identified for the Project without this variant.

Odors

The Aerial Gondola variant would not change odor sources compared to the Project, because the land uses, activities, attendance and population data are generally the same as the Project. In addition, the Aerial Gondola variant would site the same number of residential users in the same locations as the Project, and new residential development under the Aerial Gondola variant will occur well within the recommended odor buffer of numerous existing sources. Therefore, the impacts and analysis for the Aerial Gondola variant associated with odors would be the ***same as the Project without this variant – less than significant***.

Cumulative Regional Criteria Pollutant Emissions

As discussed above, construction and operational emissions associated with Aerial Gondola Variant would be similar to the Project, though slightly different because of the additional construction activity, increased generator emissions, and reduced operational mobile source

emissions. As such, criteria pollutant emissions for the Aerial Gondola Variant would be *similar to the Project and the same mitigation measures would be required*. As is the case for the proposed Project without this variant, the Aerial Gondola Variant's emissions of criteria air pollutants would be cumulatively considerable, and this cumulative impact would be *significant and unavoidable with mitigation*. No new or changed impacts or mitigation measures would be required.

Cumulative Regional Health Risks

As discussed above, health risks associated with the Aerial Gondola Variant would be very similar to the Project since the variant includes the full Project, though slightly different because of the additional construction activity, increased generator emissions, and reduced operational mobile source emissions. As discussed above, background risk values were determined using both the standard BAAQMD CEQA Guidelines approach and BAAQMD's health risk modeling for the WOCAP. The tables below present the results of both methods.

Impacts on Existing Sensitive Receptors

Table 5-17 summarizes the HRA results for the existing off-site MEIR under mitigated conditions along with the cumulative background health risks using the standard BAAQMD approach. **Table 5-18** summarizes the HRA results for the existing off-site MEIR under mitigated conditions along with the cumulative background health risks using the detailed WOCAP modeling approach. Similar to the Project, total cumulative cancer risk and annual average PM_{2.5} concentrations, with the contribution from the Aerial Gondola Variant, would exceed the significance thresholds (non-cancer chronic risk would not exceed the thresholds). As such, the same mitigation measures for the Project would be required for the Aerial Gondola Variant. These include Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), AIR-2e (Criteria Pollutant Mitigation Plan), AIR-4 (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), AIR-5a (Install MERV16 Filtration Systems), AIR-5b (Exposure to Air Pollution – Toxic Air Contaminants), and AIR-2.CU (Implement Applicable Strategies from the West Oakland Community Action Plan).

TABLE 5-17
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE EXISTING OFF-SITE MEIR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) USING THE STANDARD BAAQMD APPROACH

Emissions Source/ Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Non-Cancer Chronic Hazard Index (unitless) ^a	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	100	10	0.8
Project Contributions – Mitigated			
Existing Howard Terminal ^d	-2.2	-0.0001	-0.001
Gondola Construction ^e	0.04	--	--
Gondola Operations	0.1	2.42E-05	1.21E-04
Project Contribution	8.3	0.004	0.186

TABLE 5-17 (CONTINUED)
SUMMARY OF CUMULATIVE LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE EXISTING OFF-SITE MEIR FOR THE AERIAL GONDOLA VARIANT USING THE STANDARD BAAQMD APPROACH

Emissions Source/ Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Non-Cancer Chronic Hazard Index (unitless) ^a	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Total Mitigated Project + Gondola	8.4	0.004	0.19
Total Mitigated Net New Project + Gondola ^f	6.2	0.004	0.19
MEIR Location (UTM – X)	563080	563180	563180
MEIR Location (UTM – Y)	4183660	4183920	4183920
Cumulative Contributions			
Existing Stationary Sources ^g	0.9	0.0023	0.08
Roadways ^h	0	--	0.11
Highways ⁱ	19.1	--	0.56
Major Streets ^{i,j}	4.1	--	0.06
Railways ^j	66.7	--	0.02
<i>Total Cumulative</i>	<i>91.0</i>	<i>0.0023</i>	<i>0.82</i>
Project Plus Cumulative			
Mitigated Net New Project + Gondola	6.2	0.004	0.19
Cumulative Contributions	91.0	0.0023	0.82
<i>Cumulative Total</i>	<i>97.2</i>	<i>0.006</i>	1.01

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator; -- = no risk was calculated or data was missing

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also includes the 20% trip reduction requirement of AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, PM_{2.5} concentrations include exhaust only, tire wear, brake wear, and road dust.

^d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the TAC emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.

^e Construction of the Aerial Gondola Variant occurs during Phase 1 of the project, before any residents move in, and so variant construction only impacts off-site receptors.

^f Total mitigated net new Project + Gondola represents total mitigated Project + Gondola health risks *minus* health risks from existing Howard Terminal truck activity.

^g Existing stationary sources includes all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.

^h Roadways include nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 feet of the off-site cancer or on-site cancer and PM_{2.5} MEIRs.

ⁱ Includes nearby major streets, highway, and railways. Cancer and PM_{2.5} impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.

^j Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

TABLE 5-18
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE EXISTING OFF-SITE MEIR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) USING THE WOCAP APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	100	0.8
Project Contributions – Mitigated		
Existing Howard Terminal ^d	-2.2	-6.36E-04
Gondola Construction ^e	0.04	--
Gondola Operations	0.07	1.21E-04
Project Contribution	8.3	0.19
Total Mitigated Project + Gondola	8.4	0.19
Total Mitigated Net New Project + Gondola ^f	6.2	0.19
MEIR Location (UTM – X)	563080	563180
MEIR Location (UTM – Y)	4183660	4183920
Cumulative Contributions – Year 2024		
Highway ^g	4.0	0.38
Other ^h	14.0	0.01
Permitted ⁱ	2.2	0.15
Dynegy ^j	0.01	0.001
Schnitzer ^k	25.6	0.16
Port ^l	127.7	0.20
Rail ^m	148.2	0.05
Street ⁿ	4.0	1.99
<i>Total Cumulative</i>	<i>325.6</i>	<i>2.95</i>
Project Plus Cumulative		
Mitigated Project + Gondola Total	6.2	0.19
Cumulative Contributions	325.6	2.95
<i>Cumulative Total</i>	331.8	3.14

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator.

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) and Mitigation Measure AIR-2c (Diesel Backup Generator Specifications). This table also includes the 20% trip reduction required by AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, PM_{2.5} concentrations include exhaust only, tire wear, brake wear, and road dust.

^d Existing Howard Terminal operations include truck activity at the Project site that would be relocated, including on-site truck idling and truck movement. Because this activity would be removed from the site with implementation of the Project, the TAC emissions associated with this activity would also be removed, and the corresponding health risks for exposure of existing off-site receptors to these TAC emissions would also be removed.

^e Construction of the Aerial Gondola Variant occurs during Phase 1 of the project, before any residents move in, and so variant construction only impacts off-site receptors.

^f Total mitigated net new Project + Gondola represents total mitigated Project + Gondola health risks *minus* health risks from Existing Howard Terminal activity.

^g Highway includes exhaust and fugitive dust emissions from vehicles and trucks driving on highways.

^h Other includes ferries and truck-related businesses.

ⁱ Permitted includes all BAAQMD-permitted stationary sources in West Oakland except the Port of Oakland and Schnitzer Steel, such as Custom Alloy Scrap Sales, East Bay Municipal Utility District, and backup emergency generators.

^j Dynegy includes TAC emissions from the Dynegy Peaker Power Plant, a BAAQMD-permitted source.

TABLE 5-18 (CONTINUED)
SUMMARY OF CUMULATIVE LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE EXISTING OFF-SITE MEIR FOR THE AERIAL GONDOLA VARIANT USING THE WOCAP APPROACH

^k	Schnitzer includes TAC emissions sources associated with the Schnitzer Steel facility, including permitted stationary sources, ocean-going vessels and trucks.
^l	Port includes TAC emissions sources associated with the Port of Oakland, including permitted stationary sources, ocean-going vessels, harbor craft, dredging, cargo handling equipment, the BNSF railyard, and trucks.
^m	Rail includes the UP railyard and both freight and passenger locomotives operating on the various rail lines in the area.
ⁿ	Street includes exhaust and fugitive dust emissions from vehicles and trucks driving on local roadways.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

As presented above in Table 5-18, the total cumulative mitigated cancer risk for the new on-site MEIR would be 331.8 per million, which would exceed the cumulative significance threshold of 100 per million. Also, as presented above in Table 5-18, the total mitigated annual average PM_{2.5} concentrations for the existing off-site MEIR would be 3.14 µg/m³, which would exceed the cumulative significance threshold of 0.8 µg/m³. Non-cancer chronic risk would not exceed the thresholds for the existing off-site MEIRs, as presented in Table 5-17. Therefore, same as the Project without this variant, the Peaker Power Plant Variant's cumulative cancer risk and PM_{2.5} concentration impact at new on-site receptors would be cumulatively considerable. These exceedances are slightly greater than the Project; however, this impact would ***remain significant and unavoidable with mitigation***, same as identified for the Project without this variant. Overall, no new or changed impacts or mitigation measures would be required.

Impacts on New Sensitive Receptors

Table 5-19 summarizes the HRA results for the new on-site MEIR under mitigated conditions along with the cumulative background health risks using the standard BAAQMD approach.

Table 5-20 summarizes the HRA results for the new on-site MEIR under mitigated conditions along with the cumulative background health risks using the detailed WOCAP modeling approach. Similar to the Project, total cumulative cancer risk and annual average PM_{2.5} concentrations with the contribution from the Aerial Gondola Variant would exceed the significance thresholds (non-cancer chronic risk would not exceed the thresholds). As such, the same mitigation measures for the Project would be required for the Aerial Gondola Variant. These include Mitigation Measure AIR-1b (Criteria Air Pollutant Controls), AIR-1c (Diesel Particulate Matter Controls), AIR-2c (Diesel Backup Generator Specifications), AIR-2d (Diesel Truck Emission Reduction), AIR-2e (Criteria Pollutant Mitigation Plan), AIR-4 (Truck-Related Risk Reduction Measures – Toxic Air Contaminants), AIR-5a (Install MERV16 Filtration Systems), AIR-5b (Exposure to Air Pollution – Toxic Air Contaminants), and AIR-2.CU (Implement Applicable Strategies from the West Oakland Community Action Plan).

TABLE 5-19
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE NEW ON-SITE MEIR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) USING THE STANDARD BAAQMD APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Non-Cancer Chronic Hazard Index (unitless) ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	100	10.0	0.8
Project Contributions – Mitigated			
Gondola Construction ^d	--	--	--
Gondola Operations	0.03	7.63E-06	3.82E-05
Project Contribution	2.1	0.002	0.02
Total Mitigated Project + Gondola	2.2	0.002	0.02
MEIR Location (UTM – X)	562940	563020	563020
MEIR Location (UTM – Y)	4183440	4183640	4183640
Cumulative Contributions			
Existing Stationary Sources ^e	0.002	0.0055	0.60
Roadways ^f	0	--	0
Highways ^g	13.3	--	0.27
Major Streets ^{g,h}	2.9	--	0.03
Railways ^g	16.7	--	0.08
<i>Cumulative Total</i>	<i>33.0</i>	<i>0.0055</i>	<i>0.99</i>
Project Plus Cumulative			
Mitigated Project + Gondola Total	2.2	0.002	0.02
Cumulative Contributions	33.0	0.0055	0.99
<i>Cumulative Total</i>	<i>35.1</i>	<i>0.008</i>	1.01

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator; -- = no risk was calculated or data was missing

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), Mitigation Measure AIR-2c (Diesel Backup Generator Specifications), and Mitigation Measure AIR 5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction required by AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, PM_{2.5} concentrations include exhaust only, tire wear, brake wear, and road dust.

^d Construction of the Aerial Gondola Variant occurs during Phase 1 of the project, before any residents move in, and so variant construction only impacts off-site receptors.

^e Existing stationary sources includes all facilities within 1,000 feet of the MEIRs as per the BAAQMD Stationary Source Screening Analysis Tool. Facility information was obtained from the Alameda Stationary Source Screening Tool with additional details provided by BAAQMD. Values have been adjusted accordingly for distance from the MEIRs using BAAQMD guidance.

^f Roadways include nearby roads between 10,000 to 30,000 average daily trips. However, there were no roadways with average daily traffic between 10,000 and 30,000 trips per day within 1,000 feet of the on-site cancer or on-site cancer and PM_{2.5} MEIRs.

^g Includes nearby major streets, highway, and railways. Cancer and PM_{2.5} impacts were taken from BAAQMD raster files for the Project area. The BAAQMD's raster screening tools do not estimate chronic hazards since the screening levels were found to be extremely low. Thus, there are no chronic hazard values associated with highways, railways, or major streets.

^h Major streets, as evaluated in the BAAQMD raster screening tools, include all streets with average daily traffic above 30,000 trips per day.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

TABLE 5-20
SUMMARY OF CUMULATIVE EXCESS LIFETIME CANCER RISK, NON-CANCER CHRONIC RISK, AND ANNUAL AVERAGE PM_{2.5} CONCENTRATION AT THE NEW ON-SITE MEIR FOR THE AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) USING THE WOCAP APPROACH

Emissions Source/Receptor Type	Excess Lifetime Cancer Risk (per million) ^{a,b}	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a,b,c}
Significance Threshold	100	0.8
Project Contributions – Mitigated		
Gondola Construction ^d	--	--
Gondola Operations	0.03	3.82E-05
Project Contribution	2.1	0.02
Total Mitigated Project + Gondola	2.2	0.02
MEIR Location (UTM – X)	562940	563020
MEIR Location (UTM – Y)	4183440	4183640
Cumulative Contributions – Year 2024		
Highway ^e	2.9	0.19
Other ^f	21.2	0.02
Permitted ^g	1.9	0.14
Dynegy ^h	0.003	0.0004
Schnitzer ⁱ	52.6	0.36
Port ^j	186.4	0.24
Rail ^k	54.1	0.14
Street ^l	2.2	1.29
<i>Cumulative Total</i>	<i>321.4</i>	<i>2.38</i>
Project Plus Cumulative		
Mitigated Project + Gondola Total	2.2	0.02
Cumulative Contributions	321.4	2.38
<i>Cumulative Total</i>	323.6	2.40

NOTES:

PM_{2.5} = particulate matter that is 2.5 microns or less in diameter; = µg/m³ micrograms per cubic meter; MEIR = maximally exposed individual receptor; UTM = universal transverse Mercator

^a **Bold values** = threshold exceedance

^b Health risks include implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls), Mitigation Measure AIR-2c (Diesel Backup Generator Specifications), and Mitigation Measure AIR 5a (Install MERV16 Filtration Systems). This table also includes the 20% trip reduction required by AB 734 and construction of the pedestrian and bicycle overcrossing required as mitigation in the Transportation section.

^c For construction, PM_{2.5} concentrations include exhaust only because fugitive dust emissions are addressed through best management practices as required by Mitigation Measure AIR-1a. For operations, PM_{2.5} concentrations include exhaust only, tire wear, brake wear, and road dust.

^d Construction of the Aerial Gondola Variant occurs during Phase 1 of the project, before any residents move in, and so variant construction only impacts off-site receptors.

^e Highway includes exhaust and fugitive dust emissions from vehicles and trucks driving on highways.

^f Other includes ferries and truck-related businesses.

^g Permitted includes all BAAQMD-permitted stationary sources in West Oakland except the Port of Oakland and Schnitzer Steel, such as Custom Alloy Scrap Sales, East Bay Municipal Utility District, and backup emergency generators.

^h Dynegy includes TAC emissions from the Peaker Power Plant, a BAAQMD-permitted source.

ⁱ Schnitzer includes TAC emissions sources associated with the Schnitzer Steel facility, including permitted stationary sources, ocean-going vessels and trucks.

^j Port includes TAC emissions sources associated with the Port of Oakland, including permitted stationary sources, ocean-going vessels, harbor craft, dredging, cargo handling equipment, the BNSF railyard, and trucks.

^k Rail includes the UP railyard and both freight and passenger locomotives operating on the various rail lines in the area.

^l Street includes exhaust and fugitive dust emissions from vehicles and trucks driving on local roadways.

SOURCES: BAAQMD and WOEIP, 2019c; Appendix AIR, *Air Quality Supporting Information*.

As presented above in Table 5-20, the total cumulative mitigated cancer risk for the new on-site MEIR would be 323.6 per million, which would exceed the cumulative significance threshold of 100 per million. Also, as presented above in Table 5-20, the total mitigated annual average PM_{2.5} concentrations for the existing off-site MEIR would be 2.4 µg/m³, which would exceed the cumulative significance threshold of 0.8 µg/m³. Non-cancer chronic risk would not exceed the thresholds for the existing off-site MEIRs, as presented in Table 5-19. Therefore, same as the Project without this variant, the Peaker Power Plant Variant's cumulative cancer risk and PM_{2.5} concentration impact at new on-site receptors would be cumulatively considerable. These exceedances are slightly greater than the Project; however, this impact would ***remain significant and unavoidable with mitigation***, same as identified for the Project without this variant. Overall, no new or changed impacts or mitigation measures would be required.

Biological Resources

The Aerial Gondola Variant would result in the ***same biological resources impacts and mitigation measures*** identified for the proposed Project without this variant. Specific to this variant, nesting bird surveys and bat roost surveys would be warranted to characterize their activity in proximity to any proposed gondola facilities and determine the effects on nesting birds and special-status or protected bats. In addition, this variant may have a new less than significant impact related to potential bird interactions of collisions with the aerial gondola ropeline. The topic of avian collisions with overhead wires has been well examined, for example, by the Avian Power Line Interaction Committee (APLIC). Based on the APLIC methodology for identifying and mitigating potential hazards from new overhead wires, the proposed aerial gondola has few risk factors that would constitute a significant bird collision hazard (APLIC, 2012). For example, it would be situated in an urban setting with limited daily bird use, and seasonal migrations generally do not traverse downtown Oakland urban areas; the overhead wires or ropeline are not proposed between resting and feeding areas, which would increase collision risk; the overhead wires would not be placed in close proximity to nests: the tramway is located away from foraging areas in the Estuary; and the large diameter wires would be easily visible by birds. Therefore, while the wires present a potential additional risk to birds-in-flight that is not present with the proposed Project, the additional exposure to hazards would be minimal and considered less than significant with no additional mitigation required. No new or changed impacts or mitigation measures for this topic would be required with this variant.

Cultural and Tribal Cultural Resources

Historic Architectural Resources

The Aerial Gondola Variant would be subject to the same impacts and mitigation measures identified for the proposed Project without the variant, however this variant would ***result in new impacts and mitigation measures not identified for the proposed Project without this variant***, as follows:

Impact CUL-10: The proposed Project, with the Aerial Gondola Variant, would result in indirect impacts to the Old Oakland APL. (Criterion 1) (*Significant and Unavoidable with Mitigation*)

The Old Oakland API has a distinctive 19th century commercial district setting that is defined by its range of characteristic 19th and 20th century architecture styles and its pedestrian focus. This is represented in the narrow streets, granite and cobble stone curbs, masonry and metal building materials, mix of commercial and residential (now primarily office) spaces, and overall scale. Overall, these character defining features would remain intact under the Aerial Gondola Variant, but the concentration of new developments at the northern boundary of the district would impact integrity of feeling and setting.

The northern gondola station would be adjacent to two contributors to the Old Oakland API – the Washington Hotel (493 10th Street) and Swan’s Market (538 9th Street/930 Clay Street/901-921 Washington Street). Swan’s Market is individually listed on the National Register. In both station design options, two facades of each building would face elements of the station, platform, and support structures.

The Washington Hotel was constructed in 1913 as a hotel. It is a four story, brick Italianate building. Other than its oversized, projecting, pressed metal cornice, the architectural detailing on this building is simplified and restrained. Windows are trimmed with slightly projecting brick, string courses below the second and fourth floors are executed in brick, and the engaged pilasters are also simply outlined in slightly projecting brick. A double-height first floor houses several commercial spaces as well as the entrance to the hotel, located on 10th Street. At approximately 60 feet in height, the Washington Hotel is the tallest building in the Old Oakland API.

Swan’s Market occupies an entire city block bounded by 10th Street to the north, Washington Street to the east, 9th Street to the south, and Clay Street to the west. It is constructed with brick exterior walls and an internal steel-frame support structure. The original one-story building was constructed in 1917 and expanded in 1918, 1925, and 1940. Its iconic marquee was added in 1952. In 2000, a major rehabilitation project resulted in repairs to the original 1-2 story portions of the building and the addition of a three-story structure along Clay. The current interior configuration of the building dates to 2000. It was listed under Criterion C (architecture) on the National Register in 2001 as “an early local example of the public market building type” (National Register Nomination, 2001). Character-defining features for this resource include:

- white glazed brick,
- terra cotta tile exterior cladding,
- polychrome terra cotta ornament,
- regular storefront/entry bays, and
- three-story vertical marquee at Washington and 10th Street.

Both station options would have a platform height of 58 feet, approximately equal in height to the top of the Washington Hotel. This is approximately 40 feet higher than Swan’s Market and 20 feet higher than the Swan’s Market marquee at the corner of 10th and Washington streets. The Option 1 design for a cantilevered station would sit back from the 10th Street elevations of both buildings, terminating at the approximate centerline of 10th Street. The Option 1 design would then extend down Washington Street the length of three bays of Swan’s Market and half the Washington Street façade of the Washington Hotel. This station design would maintain a

minimum 20-foot clearance from the buildings. The station support piers would partially obscure views of the historic buildings from the street below the station platform. The station platform itself would be high enough to avoid obstructing at-grade views along 10th Street, including views of the Swan's Market marquee. However, it would cast additional shadow over portions of both buildings and alter the setting of the district at its northern boundary through introduction of a modern transportation system with its associated structures.

The Option 2 design for a non-cantilevered station would sit at the same height (58 feet), but would extend both the station mass and the platform mass farther into the API. Under this design option, the station would terminate at the southern edge of 10th Street, closer to the 10th Street elevations of both buildings. The station would terminate closer to, but still approximately 20 feet above, the Swan's Market marquee. It would be much closer to the 10th Street elevation of the Washington Hotel, creating additional shadow at the northwest corner of the building. The platform would extend further down Washington Street than in the cantilever station option, creating additional shadow over approximately four bays of Swan's Market and three-quarters of the Washington Street elevation of the Washington Hotel. Option 2 would be more visually present at the northern district boundary and would be directly visible from all hotel rooms facing Washington Street.

As viewed from the intersection of 7th and Washington streets at the southern end of the API, looking north through the district, the both station designs would be visible against the solid backdrop of the Convention Center's south elevation, a contemporary building located outside the API. Looking south through the API from the intersection of 10th and Washington Streets at the northern end of the API, the 72 inch diameter station support piers would frame views down Washington Street, partially obscure street-level views of Swan's Market (538 9th Street/930 Clay Street/901-921 Washington Street) and the Washington Hotel (493 10th Street), and the platform of both options would cast additional shade over the intersection and both buildings. In this section of the API, the setting of a 19th-century commercial district would be altered through introduction of the new platform and station structure, both of which would have a modern appearance that is not in keeping with the existing setting. It will also impact integrity of feeling in this section of the district. The introduction of these new elements is likely to diminish the 19th century character through visual interruption of building facades and longer views through the district from its northern boundary.

Additionally, both station designs would result in additional shadow and limited visual obstruction directly in front of two contributors to the Old Oakland API. In the remainder of the API, the gondola cars would pass above the street at heights greater than the tops of the buildings within the Aerial Gondola Variant Study Area. As the gondola cars pass through the API, they would have the potential to cast limited, brief, additional shadows within the Old Oakland API. While not directly impacting the district, their presence will be a distraction from the 19th century pedestrian setting through the introduction of a new form of aerial transportation through the district.

Under the Aerial Gondola Variant, no contributing resources would be demolished or otherwise physically altered, and all character-defining features would remain intact. However, there are impacts to setting at the northern boundary of the district and overhead through the district through introduction of new gondola-related features. These impacts to setting are significant and unavoidable under CEQA.

Because of the anticipated proximity of construction activities for the Convention Center Station to contributors of the Old Oakland API, Project mitigation measure **CUL-2 – Vibration Analysis for Historic Structures** would also apply to Gondola Variant.

Mitigation Measure CUL-7: Convention Center Station Contextual Design Review.

Impacts resulting from the introduction of new elements into the Old Oakland API primarily stem from the location, mass, bulk, and design of the Convention Center station. Overhead cars and the ropeline are generally outside the field of vision from observers at ground level within the district. As discussed above, the most impactful element is the gondola station itself. Therefore, the Convention Center Station shall be subject to the City of Oakland's design review (DR) procedures to ensure development of a sensitive and responsive contextual design for the Convention Center gondola station with the Old Oakland API.

The design of the Convention Center Station should minimize the horizontal and vertical extent of the new architectural structure to the greatest extent feasible within the final determined design constraints. It should occupy the minimal footprint possible and locate that footprint outside of the Old Oakland API to the greatest extent possible. In addition, the design of the platform should follow the minimal dimensions possible to limit visual intrusions and obstruction within the Old Oakland API. In addition, the stations should be composed of transparent materials, small dimension structural elements, and/or design features that minimize the structure's bulk and mass within the intersection of 10th and Washington streets.

Regardless of the final design, the Convention Center Station and platform will still be located within the Old Oakland API, will still have a substantial physical presence in that area of the district, and by its very nature will be a clearly modern transportation-related addition within a 19th century pedestrian-oriented commercial district. Therefore, this mitigation measure will not reduce the impacts of Gondola Variant to less than significant.

Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)

Significance after Mitigation: Significant and Unavoidable.

Impact CUL-11: The proposed Project, with the Aerial Gondola Variant, could result in indirect impacts to the former Alameda County Coroner's Office and Morgue at 480 4th Street, a historic resource. (Criterion 1) (*Less than Significant with Mitigation*)

As proposed, the design of the central gondola tower consists of a four-pier base topped by a tapering steel structure. The piers would be 72 inches in diameter for the first three feet above

grade, and they would decrease to 60 inches in diameter from three to 15 feet above grade (see Figure 5-13). Above 15 feet, the structure changes to a series of steel structural members, similar to an electrical transmission tower (see Figure 5-13). The overall design is transparent above 15 feet, with limited obstruction of views of adjacent building as seen from grade. The new gondola and its tower would not block views of the Alameda County Morgue nor would it obstruct passage to or around the building. The building is historically significant for its Art Deco architecture. This significance would not be altered and views of the primary (south) facade would not be obstructed by the introduction of the gondola tower on Washington Street. The proposed location of the tower has the potential to partially obstruct access to the current parking lot associated with the building, however this lot is not historically significant and a secondary entrance to the lot is available from 4th Street. Because the building is historically significant for its design by master architect Henry H. Meyers and its historical function as a county morgue, partial obstruction of its secondary (west) façade would not diminish its historical integrity.

Due to the anticipated proximity of construction activities for the Jack London Square Station to the Western Pacific Railroad Depot, Project Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures) would also apply to Gondola Variant. Maintaining vibration levels below a site-specific threshold would limit the potential for damage associated with construction activities. Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), would reduce potential impacts to less than significant.

Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)

Significance after Mitigation: Less than Significant.

Impact CUL-12: The proposed Project, with the Aerial Gondola Variant, could result in indirect impacts to the West Waterfront ASI. (Criterion 1) (*Less Than Significant with Mitigation*)

From the street, the gondola would not block views or otherwise interfere with the early-20th-century industrial setting that is a character-defining feature of the West Waterfront ASI.¹¹ The passing gondola cars would cast shadows within the ASI as they pass overhead but would not directly impact any of the contributors. As viewed from the street, the presence of an overhead transportation system would not alter views through the ASI, relationships between the contributing buildings, or any architectural features of the district or any individual contributor.

Because of the anticipated proximity of construction activities for the Jack London Square Station to the Western Pacific Railroad Depot, Project Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures) would also apply to Gondola Variant. Maintaining vibration levels below

¹¹ The City of Oakland Historic Preservation Element does not confer historic status to ASI's for the purposes of CEQA. However, out of an abundance of caution, the City has elected to treat the West Waterfront ASI as a resource for the purposes of this CEQA analysis.

a site-specific threshold would limit the potential for damage associated with construction activities. Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), would reduce potential impacts to less than significant. Therefore, the impact of the Aerial Gondola Variant on the West Waterfront ASI is less than significant.

Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)

Significance after Mitigation: Less than Significant.

Impact CUL-13: The proposed Project, with the Aerial Gondola Variant, could introduce new structures that could impact the setting immediately adjacent to the Western Pacific Railroad Depot, a historic resource. (Criterion 1) (*Less than Significant with Mitigation*)

The Aerial Gondola Variant would travel down Washington Street, along the western, secondary façade of the Western Pacific Railroad Depot. The Depot is a one-story building standing approximately 20 feet in height. The gondola cars will pass over the depot at a height of approximately 70 feet. The new gondola features would not block views of the Depot, obstruct passage to or around the Depot, or otherwise alter the significance of the Depot as a contributor to the industrial growth of Oakland during the early 20th century.

From the street, the gondolas would not block views or otherwise interfere with the architectural character or any individual character-defining features of the Western Pacific Railroad Depot. The passing gondola cars would cast intermittent shadows on the resource but would not directly impact it. The presence of an overhead transportation system would not alter of the resource or relationships between the building and the former track locations along 3rd Street. This resource would not be demolished or otherwise physically altered as a result of the Aerial Gondola Variant. Therefore, the indirect impact of the Aerial Gondola Variant on the Western Pacific Railroad Depot resulting from the altered setting is less than significant.

Because of the anticipated proximity of construction activities for the Jack London Square Station to the Western Pacific Railroad Depot, Project Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures) would also apply to Gondola Variant. Maintaining vibration levels below a site-specific threshold would limit the potential for damage associated with construction activities. Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), would reduce potential impacts to less than significant.

Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)

Significance after Mitigation: Less than Significant.

Impact CUL-4.CU: The proposed Project, in combination with the Aerial Gondola Variant, would contribute to a citywide significant cumulative impact on cultural and historic

resources identified in the DOSP EIR through changes to the setting of the Old Oakland API. (Criterion 1) (*Significant and Unavoidable with Mitigation*)

The Aerial Gondola Variant would introduce a modern gondola station along the northern boundary of the Old Oakland API that is located in close proximity to two contributors to the API, one of which is individually listed on the National Register. It also introduces a ropeline above the district, following Washington Street, through the API. Both variant elements would be visible within the API, as viewed at grade from Washington Street. Only the ropeline would be visible from within the API as viewed from other locations. The station would introduce new shadows up to one-quarter block into the API along Washington Street. The ropeline and gondolas would introduce intermittent shadows on those API contributors along Washington Street. As discussed above, the Aerial Gondola Variant has the potential to significantly alter the setting of the Old Oakland API.

The Draft DOSP EIR identifies a two types of cultural resource impacts related to increased development; one resulting from potential loss of specific properties and one resulting from potential alterations of specific properties. Additionally, the DOSP EIR identifies a significant and unavoidable cumulative impact with regard to citywide cultural resources, including “past, present, existing, approved, pending, and reasonably foreseeable future development.” (DOSP DEIR, 362, 2019).

The Aerial Gondola Variant falls within the boundaries of the DOSP, and would result in a significant and unavoidable impact to the setting of the Old Oakland API, a historic resource subject to the DOSP.. Even with implementation of Mitigation Measure CUL-7 (Convention Center Station Contextual Design Review) and Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), this impact cannot be mitigated to a less than significant level. It therefore contributes to the citywide significant and unavoidable cumulative impact identified in the DOSP EIR. This impact cannot be mitigated to a less than significant level.

Mitigation Measure CUL-7: Convention Center Station Contextual Design Review. (see Impact CUL-10)

Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)

Significance after Mitigation: Significant and Unavoidable.

Archaeological Resources, Human Remains, and Tribal Cultural Resources

The Aerial Gondola Variant would result in the *same archaeological resources human remains, and tribal cultural resources impacts and mitigation measures* as identified for the proposed Project without the variant (Chapter 4 and Table 2-1. Similar to the proposed Project, the variant is in a location that does not have any previously recorded prehistoric resources. Construction of the variant would be in areas that have been highly disturbed and consist primarily of artificial fill. The variant would include construction in areas within the historic shoreline, and inland,

which has a heightened potential for prehistoric resources; however, the area has also been highly disturbed from the existing infrastructure. Based on a review of site distribution in this area (NWIC, 2018) and previous disturbance, the Aerial Gondola Variant would be constructed in an area that has a lessened potential to uncover previously undiscovered prehistoric archaeological resources, human remains, or tribal cultural resources.

The Aerial Gondola Variant also does not have any previously recorded historic-era archaeological resources. The variant footprint is within the existing roadways, which has a lessened archaeological sensitivity for historic-era features such as artifact-filled wells and privies that are usually found in the rear lots of residences and business. In addition, similar to the proposed Project, there is the potential to uncover historic-era archaeological materials and features such as purposeful fill and architectural features. However, per the standards set forth in Section 15064.5 of CEQA Guidelines these types of materials are not likely to yield important information in history, nor contain information needed to answer important scientific research questions, and would therefore not likely be considered a historical resource or a unique archaeological resource for the purpose of CEQA.

Given the potential to uncover historic-era archaeological materials and features in the vicinity of the Aerial Gondola Variant, the discovery of these types of resources, if not appropriately evaluated following discovery, would be a potentially significant impact. However, implementation of the mitigation measures proposed for the Project would reduce impacts to archaeological resources by requiring archaeological monitoring in areas of historic-era archaeological sensitivity and that work halt in the vicinity of a find until it is evaluated by a Secretary of the Interior-qualified archaeologist.

The proposed Project with this variant would be subject to the same mitigation measures identified for the proposed Project and would result in the same less-than-significant impacts to archaeological resources, human remains, and tribal cultural resources identified for the proposed Project without this variant.

No new or changed impacts related to archaeological and tribal resources or human remains would occur with this variant and no additional mitigation measures would be required.

Energy

Construction Energy Use

Construction-related energy use was estimated for activities that would be associated with building the Aerial Gondola Variant-. Construction would involve additional off-road construction equipment activity and on-road construction worker and truck trips. All other construction activities associated with ballpark and non-ballpark building Project construction would remain the same as the Project. Construction of the Aerial Gondola Variant would result in greater energy use requirements compared to the Project alone. The construction equipment list for the Aerial Gondola Variant was provided by the Project sponsor. Diesel and electricity usage from off-road equipment and on-road construction vehicles and electricity associated with water use are shown in Table 5-21. Details of the construction assumptions are presented in Appendix ENE.

TABLE 5-21
AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) MITIGATED CONSTRUCTION ENERGY RESOURCE USE

Energy Use Type	Unit of Measure	Project Construction Usage ¹	Aerial Gondola Variant ²	Combined Project and Aerial Gondola (Variant)
Electricity				
Water Consumption	kWh/Project	815,619	16	815,635
Off-road Equipment ²	kWh/Project	3,019,591	8,922	3,028,513
Total Electricity Use	kWh/Project	3,835,210	8,938	3,844,148
Annual Average Electricity Consumption³	kWh/year	547,887	1,277	549,164
Diesel				
On-road vehicles	gallons/Project	777,648	503	778,151
Off-road equipment	gallons/Project	1,845,763	85,979	1,931,742
Total Diesel Use	gallons/Project	2,623,410	86,482	2,709,893
Annual Average Diesel Use³	gallons/year	374,773	12,355	387,128
Gasoline				
On-road vehicle	gallons/Project	869,915	7,445	877,360
Total Gasoline Use	gallons/Project	869,915	7,445	877,360
Annual Average Gasoline Use³	gallons/year	124,274	1,064	125,337

NOTES:

¹ See Section 4.5, Energy, Table 4.5-3.² See Energy Technical Report, Tables 20 through 23.

SOURCE: Ramboll, 2020. (Detail provided in Appendix ENE to this Draft EIR.)

As shown in Table 5-21, construction of the Aerial Gondola Variant would result in additional amounts of electricity, diesel, and gasoline consumption. The overall construction energy{ XE "energy" } use requirements of the gondola combined with the Project would not be substantial relative to the total sales of transportation fuels in Alameda County. In addition, implementation of Mitigation Measure AIR-1b (Criteria Air Pollutant Controls) would help avoid wasteful or inefficient use of energy during construction by requiring that equipment be well maintained, and require that idling of commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower be limited to a maximum of 2 minutes in accordance with the Title 13, Section 2485, of the California Code of Regulations and Title 13, Section 2449, of the California Code of Regulations. Implementation of Mitigation Measure AIR-1c (Diesel Particulate Matter Controls) would avoid inefficient use of energy by requiring newer, more efficient off-road construction equipment. Therefore, construction of the Aerial Gondola Variant would not result in wasteful, inefficient, or unnecessary consumption of fuel or energy, or conflict with adopted energy conservation plans or violate energy standards. The impacts would be *less than significant with mitigation, the same as identified for the proposed Project without the variant*.

Operational Energy Use

The Aerial Gondola Variant would have three effects on energy use: 1) it would reduce electricity and fuel used by vehicles traveling to and from the Project site, since some visitors to the site would take the Aerial Gondola instead of a vehicle; 2) it would consume electricity for its own operation at each of the two proposed stations; and 3) it would increase diesel fuel use relative to emergency generator testing. The energy reduced from vehicles as well as the energy consumed by the Gondola and emergency generators are shown in Table 5-22.

TABLE 5-22
AERIAL GONDOLA VARIANT (PROJECT + GONDOLA) MITIGATED OPERATIONAL ENERGY RESOURCE USE

Energy Use Type	Change from Baseline to Full Project Buildout	Aerial Gondola	Combined Project and Aerial Gondola (Variant)
Electricity (MWh/year)			
Buildings	52,391	-	52,391
Water Consumption	3,733	-	3,733
Aerial Gondola	-	4,887	4,887
Mobile Sources	1,063	-123	941
EV Chargers ²	235	-	235
Total Electricity Use	57,421	4,764	62,186
Natural Gas (kBtu/year)			
Buildings	68,948,041	-	68,948,041
Mobile Sources ²	3,542,903	-457,205	3,085,697
Total Natural Gas Use	72,490,944	-457,205	72,033,738
Diesel (gallons/year)			
Mobile Sources	1,018,386	-131,723	886,663
TRU Operation	59	-	59
Mobile Source Reduction from EV Chargers	-8,453	-	-8,453
Generator Testing	16,167	8,221	24,388
Total Diesel Use	1,026,159	-123,503	902,655
Gasoline (gallons/year)			
Mobile Sources	3,154,454	-426,824	2,727,631
Mobile Source Reduction from EV Chargers	-26,518	-	-26,518
Total Gasoline Use	3,127,936	-426,824	2,701,113

The potential for the proposed Variant (Project with the Aerial Gondola) to result in wasteful, inefficient, or unnecessary consumption of fuel or energy, or to conflict with an adopted energy conservation plan or violate energy standards would result in a less-than-significant impact relative to electricity consumption, and relative to the Project would result in beneficial impacts relative to natural gas, diesel, and gasoline consumption. *The same less than significant with mitigation impacts would result as identified for the proposed Project without the variant.* No new or additional impacts or mitigation measures for this topic would be required.

Geology, Soils and Paleontological Resources

The Aerial Gondola Variant would result in *similar geology, soils or paleontological resources* identified for the proposed Project without this variant. While geology, soils, and paleontological resources conditions can vary within that distance or less, the setting conditions for geology, soils, and paleontological resources for this variant are based on information obtained from available published sources, and for parts of the gondola located near the proposed Project site (i.e., Jack London Square Station), reasonable assumptions are made that overall seismic and geologic conditions along the gondola corridor are similar to those discussed for the proposed Project in Chapter 4 of this document, except as specified below. As previously stated in this chapter, the conceptual design of the gondola considered existing site geology to determine the amount and scale of foundation areas to support the stations and towers (SCJ Alliance, 2019). Also see the discussion of off-site conditions factored into this analysis in *Study Area and Setting* preceding this impacts analysis section.

Like the proposed Project site, this variant is located in a recognized seismically active region of California and the Bay area, with the nearest active fault the same distance east it is from the proposed Project site, as discussed in Section 4.6 or Chapter 4. Located in a built-out urban area of downtown and Jack London Square, including the proposed Project gondola tower location at 4th and Washington Street, the reasonable likelihood of unmarked utilities, subsurface hazards, or alternative wastewater disposal systems is minimal.

Unlike the proposed Project site and area which is typified by soils with “High Liquefaction Susceptibility,” the Aerial Gondola Variant area north of Water Street (specially nearly all of downtown Oakland) is typified by “Moderate Liquefaction Susceptibility” (DOSP DEIR Figure V.H-3, 2019). To the extent that soil conditions are expansive or corrosive, or that unique paleontological resources or geologic features exists, appropriate mitigation measures (or similar City Standard Conditions of Approval) and regulatory requirements that apply to the proposed Project or other similar development projects in the downtown Oakland area would apply, including Mitigation Measures GEO-1 (Site-Specific Final Geotechnical Report) and GEO-2 (Inadvertent Discovery of Paleontological Resources During Construction). No new or additional impacts or mitigation measures for this topic would be required.

Greenhouse Gas Emissions

The Aerial Gondola Variant would result in additional construction GHG emissions compared to the Project, due to construction activity associated with building the Gondola, and a reduction in operational GHG emissions due to the shifting of on-road vehicle trips to the electrically-powered Gondola as a mass transit option for people going to the Project site.

GHG Construction Emissions

Construction emissions were estimated for activities associated with building the Gondola. Construction would occur from 2021 to 2023 and involve additional off-road construction equipment activity and on-road construction worker and truck trips. All other construction

activities associated with ballpark and non-ballpark building Project construction would remain the same as the Project. Details of the construction assumptions are presented in Appendix AIR.

Construction for the Aerial Gondola Variant would emit approximately 866 MT CO₂e during the years 2021 through 2023, as shown in Table 105 of the *Air Quality Technical Report* (see Appendix AIR). The additional construction emissions amount to approximately 29 MT CO₂e per year when amortized over the 30-year life of the Variant, resulting in total amortized construction emissions for the Aerial Gondola Variant of approximately 1,088 MT CO₂e per year.

GHG Operational Emissions

Since all of the square footage of the Project is being preserved in the Aerial Gondola Variant, the Project land uses, activities, attendance and population data are the same as the Project.

Additionally, mobile trips associated with Project hauling, vendor deliveries, and workers would also remain the same. The Gondola Variant would require the use of electricity, which would add approximately 477 MT CO₂e/year to the Project, as shown in Table 106 of the *Air Quality Technical Report*. However, the Aerial Gondola Variant would result in avoided GHG emissions from the reduction of vehicle miles traveled by people using the gondola as a mass transit option instead of on-road vehicles, as well as an increase in GHG emissions from the electricity required to power the gondola. As shown in Table 108 of the *Air Quality Technical Report*, the estimated annual reduction in VMT would be more than 15 million miles per year, resulting in an overall annual reduction in GHG emissions of approximately 5,086 MT CO₂e/year at Full Buildout.

GHG Emissions Impact

Table 5-23 below presents total annual GHG emissions (amortized construction plus operations) emissions under the Aerial Gondola Variant at Full Buildout (2027), showing that net new emissions for the Aerial Gondola Variant would be approximately 46,434 MT CO₂e/year without mitigation, which is approximately 3,686 MT CO₂e/year less than the Project at Full Buildout. As such, the mitigation obligation with the Aerial Gondola Variant would be less than it would be with the Project in order to meet the “no net additional” emissions threshold under Impact GHG - 1. With respect to Impact GHG-2, the Aerial Gondola Variant would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. Rather, it would support the goals of SB 743, the City’s Transportation Impact Review Guidelines (TIRG), Plan Bay Area 2040, and the 2017 Scoping Plan Update, all of which seek to reduce vehicle miles traveled (VMT). Thus, with implementation of **Mitigation Measures GHG-1a** and **GHG-1b**, the GHG emissions impact of the would remain **less than significant with mitigation**, as identified for the Project without this variant.

TABLE 5-23
ESTIMATED EMISSIONS FOR GONDOLA VARIANT (PROJECT + GONDOLA) AT FULL BUILDOUT (2027)

Source	MT CO ₂ e per year
Ballpark emissions ^a	10,386
Non-Ballpark Project emissions ^a	48,067
Gondola variant construction emissions (amortized over 30 years) ^b	1,088
Gondola variant emissions from additional energy use ^c	477
Gondola variant emissions from unmitigated generators ^d	84
Gondola variant avoided emissions ^e	-5,086
Total Variant emissions (unmitigated)	55,016
A's Related Existing Conditions emissions ^f	-8,581
Net new Variant emissions (unmitigated)	46,434
NOTES: a. From Section 4.7 GHG Emissions, Table 4.7-6 b. From Section 4.7 GHG Emissions, Table 4.7-5, adjusted for additional emissions from Gondola Variant construction as shown in Table 105 of the Air Quality Technical Report. c. From Air Quality Technical Report, Table 106 d. From Air Quality Technical Report, Table 107 e. From Air Quality Technical Report, Table 108 f. From Section 4.7 GHG Emissions, Table 4.7-4 SOURCE: ESA and RAMBOLL (Appendix AIR)	

Hazards and Hazardous Materials

The Aerial Gondola Variant would result in *different hazardous materials impacts and mitigation measures* compared to those identified for the proposed Project without this variant.

Hazardous Materials

The footprint of this variant is located entirely outside the footprint of the proposed Project (see Figure 5-1). The Aerial Gondola Variant location includes some of the oldest parts of the City and some of the oldest buildings. Moreover, for years since the 1850s, land uses have included those that could result in soil and groundwater contamination (DOSP DEIR Section H, 2019).

Environmental Conditions - Gondola Alignment

Hazardous materials are present at several sites near structures associated with the proposed gondola alignment, as summarized below. As discussed under *Study Area and Setting* preceding this impacts analysis section, the setting conditions for hazards and hazardous materials for this variant are based on information obtained from available published sources, and for parts of the gondola located near the proposed Project site (i.e., Jack London Square Station), reasonable assumptions are made based on proximity. This information below is compiled from available site investigation reports and inventories and does not include all properties within the Aerial Gondola Variant alignment, including the stations proposed at Jack London Square (south end of Washington Street), the Convention Center (Washington Street at 10th Street) and the gondola tower (Washington Street, between 4th and 5th Streets):

- 910 Broadway (hotel)** - During redevelopment of the site, a former parking lot, residual petroleum hydrocarbon contamination was encountered along the sidewalk area along Ninth Street, during excavation activities for the hotel foundation. The case met all General Criteria of the State Water Resources Control Board's *Low Threat Underground Storage Tank Case Closure Policy* (LTCP) and two of the three Media Specific LTCP Criteria. The findings of a subsequent vapor intrusion study demonstrated that concentrations of hydrocarbons were below the laboratory reporting limits for the indoor air samples, thus satisfying the LTCP vapor intrusion-indoor criteria.
- 810 Clay Street (former Salvation Army facility)** - A leaking underground storage tank (LUST) case associated with this site was closed in January 2003, which had reportedly resulted from the former operation of a gasoline service station. Although no UST documentation had been identified, no tanks were encountered when impacts were identified in soil and groundwater in 1999. At the time of case closure, up to 3,800 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons as gasoline (TPH-g) and 22 mg/kg benzene remained in soil, and up to 180 micrograms per liter (µg/l) benzene remained in groundwater.
- 1100 Clay Street (north of Convention Center / Marriott)** - The site is developed as green space containing art sculptures and large trees that encloses the entryway and exit for the subterranean Oakland City Center parking garage and loading dock of the adjacent 1111 Broadway building. The site is under construction for redevelopment when this Draft EIR is being prepared. Historical records indicate that the site was developed with commercial retail space, a boarding house and a stable as early as 1889. By 1912, a restaurant and a candy factory occupied the area. Four USTs reportedly may be present at or adjacent to the site from a former Shell branded service station. Groundwater and soil vapor impacts have been identified likely associated with the USTs. The extent of a groundwater plume has not been determined.
- 461 8th Street (SWC of Broadway at 8th Street)** - A gasoline service station operated at the site until 1980, and free product was reported in a Bay Area Rapid Transit (BART) tunnel under the intersection of 7th Street and Broadway in January 1979. Approximately 2,600 gallons of a gasoline and water mixture was removed from the BART tunnel between October 1979 and April 1980. A Corrective Action Plan (CAP) was prepared for the site in February 2008. Remediation by excavation and secondary remediation by in-situ chemical oxidation (ISCO) was approved. The site was redeveloped in 2017. During excavation, impacted soil was encountered near the base of the excavation at 14 feet below the ground surface. Semi-annual groundwater monitoring is being performed, and free product was observed during one sampling event. A March 2018 sampling event identified 840 µg/l benzene and 64 µg/l ethylbenzene in groundwater samples. The Alameda County Department of Environmental Health (ACDEH) requested a Corrective Action Plan (CAP) and required delineation of offsite groundwater impacts.
- Jack London Square –Parcel D (466 Water Street) (SWC of Embarcadero West and Broadway)** - Several environmental investigations performed at the site between 1994 and 2014 identified the presence of petroleum compounds and heavy metals in soil and groundwater at concentrations slightly over environmental screening levels. Recent testing identified heavy metals (total chromium, lead and mercury) and low levels of petroleum hydrocarbons in shallow soil at the site. Soluble lead exceeded federal hazardous waste criteria in selected samples.
- Jack London Square - Parcel C (South of Washington Street at Water Street)** - A 2007 site characterization identified low levels of metallic constituents in groundwater. TPH and heavy metals were identified in soil samples, mostly below screening levels. One composite

soil sample exhibited a soluble lead concentration that exceeded State hazardous waste criteria.

- **Jack London Square Station – Site A (South of Water Street, between Clay and Washington Streets)** (shown on Figure 4.8-5 in Chapter 4 of this Draft EIR) - Site A is located adjacent to the proposed Project site (east of Clay Street) and approximately 200 feet southeast of where the Jack London Square station would occur. Construction of the Aerial Gondola Variant could encounter contaminated soil gas, soil, and/or groundwater at the proposed Jack London Square Station due to being located adjacent to the known hazardous materials at Site A. Residual levels of petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), and metals are present in soil and groundwater at Site A.

Site A was previously investigated and the case closed because the Regional Water Quality Control Board (RWQCB) concluded that because PAHs and metals are not highly mobile, the chemical concentrations in groundwater are relatively low, and the future use of the site was to be open space, public recreation, and commercial, and therefore, Site A did not pose a threat to the public or the environment. Contact with residual site contaminants is currently prevented by the hardscape of the existing building that covers Site A.

New Impact and Mitigation Measure

Based on the site conditions described above, the Aerial Gondola Variant site would not cause the potentially significant impacts or require the mitigation measures identified for the proposed Project (Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c and HYD-1 identified in Chapter 4), which are tailored to address the conditions of the proposed Project site, resulting from its historic industrial uses. However, impacted soils (and surface water or groundwater) could exist throughout the gondola corridor – including at the Convention Center Station and Gondola Tower, even though site-specific environmental conditions are not available for those locations for use in this Draft EIR.

The impacts of the Aerial Gondola variant are similar to those for any development project located downtown and in Jack London Square; therefore, the mitigation measures and regulatory requirements for traditionally applied to such projects are appropriate for the variant. The proposed construction of the Aerial Gondola Variant could result in construction workers encountering contaminated soil and possibly contaminated groundwater if dewatering is required, resulting in a significant impact. Hence, the following new impact (not identified for the proposed Project without this variant) would apply, and the following new mitigation measure is identified to reduce the new potential impact associated with the Aerial Gondola Variant to less than significant:

Impact HAZ-5: The proposed Project, with the Aerial Gondola Variant, would have the potential to encounter hazardous materials which could create a significant hazard to the public or the environment. (Criterion 5) (*Less than Significant with Mitigation*)

Mitigation Measure HAZ-3: Aerial Gondola Soil and Groundwater Management Plan.

Soil and Groundwater Management Plan

Prior to issuance of a building permit for the Aerial Gondola Variant, the contractor shall develop and implement a Soil and Groundwater Management Plan (SGMP) prior to commencement of construction activities specifying how the construction contractor(s) will remove, handle, transport, and dispose of all excavated materials in a safe, appropriate, and lawful manner. The SGMP must identify protocols for soil testing and disposal. Contract specifications shall mandate full compliance with all applicable local, state, and federal regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in excavated soil.

Hazardous Waste Management Procedures

If soil classified as hazardous waste is encountered, the material shall be managed as hazardous waste pursuant to CCR Title 22, Division 45, in accordance with the following procedures:

- Excavation and transportation will be performed by OSHA-certified personnel, as needed and required by all federal, state or local laws.
- Soil will either be characterized in-situ, or staged on site for characterization. If all or any portion of the soil is determined to be hazardous waste, such portion will be managed and have a disposition in accordance with applicable hazardous waste regulatory requirements.
- Breathing zones shall be monitored for dust control.
- All haul trucks (including those transporting soil, sand, or other loose material including demolition debris offsite) will be covered, as required by the applicable laws.
- Soil that is visibly impacted or has an odor will be stockpiled onsite, if needed, and will be placed on 10-mil plastic sheeting, or equivalent, pending characterization. As necessary, based on meteorological and Site conditions, the soil stockpiles will be protected and secured to prevent dust or runoff during storm events.

Groundwater Dewatering Controls

As part of the SGMP, the contractor shall develop a groundwater dewatering control and disposal plan specifying how groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate and lawful manner. Consistent with Best Management Practices (BMPs), the SGMP must identify the locations at which groundwater dewatering is likely to be required, the test methods to analyze groundwater for hazardous materials, the appropriate treatment and/or disposal methods, and approved disposal site(s), including written documentation that the disposal site can accept the waste. The contractor(s) may also discharge the effluent under an approved permit to a publicly owned treatment works, in accordance with any requirements the treatment works may have.

Site-Specific Health and Safety Plans (HASPs)

The contractor shall develop a site-specific HASP as part of the SGMP to ensure that construction activities are performed in a manner protective of the health and safety of site construction workers and of interim site uses in the construction zone(s). The HASP is a mechanism through which the workers involved in the construction are informed of the presence of chemicals in the area prior to initiating work.

Review and Approval

The SGMP shall be submitted to the DTSC and the Port of Oakland for review and approval prior to commencement of construction.

Significance after Mitigation: Less than Significant.

New Impact HAZ-5 and Mitigation Measure HAZ-3 above would apply specifically to the Aerial Gondola Variant and would not apply to the proposed Project. Impacts associated with development on the Howard Terminal property are addressed by Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HYD-1.

The use of hazardous materials during the construction and operation of the Aerial Gondola Variant would be subject to the same existing regulations as the proposed Project that address the routine use and accidental spills of hazardous materials (Impact HAZ-1).

Emergency Response / Evacuation

In addition, similar to the proposed Project, construction of this variant would be required to develop and implement a traffic control plan to ensure emergency vehicles are able to pass through the area during operations and construction, and more generally that the variant will not adversely affect emergency response or evacuation plans. With this variant, vehicular traffic other than emergency service vehicles would no longer have access to Washington Street, between Embarcadero West and Water Street, due to development of the Jack London Square Station. The Convention Center Station also may result in changes to, or limited access on 10th Street and/or parts of Washington Street. Also, the diagonal escalator bank from the Jack London Square Station may encroach on Water Street and potentially limit traffic flow compared to existing conditions. These potential changes would not cause new significant CEQA impacts but would be managed through the City to ensure safety, traffic flow and emergency access/egress, as well as through adherence to improvements and measures in the aforementioned traffic control plan and specifically the Project's Transportation Management Plan (TMP) (see 5.2.14 below and Section 4.15 in Chapter 4).

Summary

In summary, the proposed Project with this variant would result in a ***new hazardous materials impact and mitigation measure*** that replace the site-specific Project impact and mitigation identified to address potential exposure to the public and environment without this variant. With the incorporation of this new mitigation measure, impacts of the Aerial Gondola Variant would be similar to those of the Project.

Hydrology and Water Quality

The Aerial Gondola Variant would result in ***different hydrology and water quality impacts and mitigation measures*** compared to those identified for the proposed Project without this variant.

Water Quality

As discussed under *Study Area and Setting* preceding this impacts analysis section, the setting conditions for hydrology and water quality for this variant are based on information obtained from available published sources, and for parts of the gondola located near the proposed Project site (i.e., Jack London Square Station), reasonable assumptions are made based on proximity to the Project site.

As discussed in 4.8, *Hazards and Hazardous Materials*, the Aerial Gondola Variant corridor includes some of the oldest parts of the City and some of its oldest buildings. Land uses have included uses that could result in soil and groundwater contamination, although conditions at the variant site are not fully characterized. To the extent that impacted surface or groundwater exist or are affected by the variant during construction or its operation, appropriate mitigation measures and regulatory requirements appropriate for development projects in the vicinity of downtown and Jack London Square would apply.

Despite the potential hazardous conditions that could exist in or near the gondola corridor (as discussed above in section 5.2.8), the sites where the two gondola stations and gondola tower would be constructed would not necessarily warrant the same impact or mitigation measures identified for the proposed Project. Therefore, new **Impact HYD-6** below is identified to address potential impacts to surface and groundwater quality resulting from this variant.

Mitigations identified for the proposed Project require preparation, approval, implementation, and compliance of specific remedial action workplans, covenants and associated plans to address hazards soil and water conditions (Mitigation Measures HAZ-1a, HAZ-1b, and HAZ-1c and HYD-1 identified in Chapter 4); these requirements are not warranted for the Aerial Gondola Variant and would not apply. New **Mitigation Measure HAZ-2** (identified to address potential hazardous materials, see section 5.2.8 above) also addresses surface water and groundwater quality and will apply to this variant.

Impact HYD-6: The proposed Project, with the Aerial Gondola Variant, could violate surface water and groundwater quality standards, result in erosion or siltation on- or offsite that could affect receiving water quality, and/or substantially degrade surface water and groundwater quality and conflict with implementation of a water quality control plan. (Criteria 1, 3, and 7) (*Less than Significant with Mitigation*)

Mitigation Measure HAZ-2: Aerial Gondola Soil and Groundwater Management Plan (see Impact HAZ-5)

Significance after Mitigation: Less than Significant.

Flooding

Like most of the proposed Project site, this variant corridor is completely covered by impervious hardscape and minimal landscaping. Also, except for areas in the north and northeast areas of the

proposed Project site (in particular, parts of the Peaker Power Plant Variant, as discussed in section 5.1.9), the Aerial Gondola Variant stations or corridor are not within areas subject to the 100-year flood zone, per FEMA maps (Moffat & Nichol, 2019; City of Oakland, DOSP EIR Section J, 2019). The variant would not change this condition, and stormwater flows or flooding potential into existing City and Port storm drainage facilities that discharge to the bay or risk of flooding would not change.

With regard to flooding and sea level rise, the Jack London Square Station is located in an area that could be inundated with 6.3 feet of sea level rise (City of Oakland, DOSP EIR Section J, 2019). The gondola boarding platform at the Jack London Square Station would be approximately 27 feet above the ground, making it resilient to future projected sea level rise; however, the escalators near the ground-level and the elevators and storage proposed within an existing building could be susceptible to future rising sea levels. Similar to the proposed Project, at existing grades, the Jack London Square Station falls within the guidance range (5.7-6.9 feet) for medium-high risk aversion from the state (OPC, 2018), and would meet the medium-high risk aversion sea level rise range through 2090. Like the proposed Project, minimal to no required adaptations would be required to keep up with rising sea levels under the medium-high risk aversion scenario for the Project with the Aerial Gondola Variant (Moffat & Nichol, 2019). Because strategies have been developed to adapt the Project site to increased risk of inundation, and the Project would be required to meet conditions related to sea-level rise pursuant to AB 1191, including adaptive management and contingency plans, the proposed Project with the Aerial Gondola Variant would continue to have a less than significant effect due to exposing people or structures to a substantial risk of loss, injury or death due to sea level rise related flooding.

Therefore, the variant would result in the same impacts related to flooding. No new or changed impacts would occur and no new mitigation measures would be required.

Summary

No other new or additional impacts or mitigation measures for hydrology and water quality would be required.

Land Use, Plans and Policies

The Aerial Gondola Variant would result in the same land use, plans and policies impacts identified for the proposed Project without the variant (Chapter 4 and Table 2-1). The aerial gondola ropeline and cabins would be elevated above existing structures along Washington Street, and would exceed the minimum vertical clearances required by the California Department of Transportation (Caltrans) above I-880 and by the California Public Utilities Commission (CPUC) above the UPRR tracks. Therefore, the gondola would not create a barrier that would prevent or hinder the existing flow of people or goods. The proposed gondola stations would generally sit above existing roadways in urbanized areas, and would not cause a physical division of a community. Therefore, similar to the proposed Project, the Project with this variant would not cause the physical division of an established community.

With regard to land use compatibility, the Project with the Aerial Gondola Variant would introduce transportation-related uses along the existing transportation corridor provided by Washington Street from 10th Street in downtown Oakland to Jack London Square. Adjacent uses to the variant site include mixed-use residential and commercial uses in Old Oakland, civic uses along Washington Street (including the Wiley W. Manuel Courthouse and the Oakland Police Department headquarters), and commercial uses in Jack London Square. The gondola is proposed to traverse over the skyway between the courthouse and police building at Washington and 6th Street (high enough to avoid gondola passengers peering into the 6th floor windows), over I-880, and over the UPRR tracks. The ropeline would be over the street. Thus, the aerial gondola would not disrupt or degrade adjacent land uses to such a degree that the functional use of the adjacent land for its existing or planned purpose is imperiled.

With regard to conflicts with land use policies, the Jack London Square Station is located on land that is an asset of the public trust, and thus, subject to trust use restriction. Assuming that the variant site is subject to the trust, impacts related to conflict with the Public Trust Doctrine would not be greater than those for the proposed Project. The variant site is not located within BCDC Seaport Plan's designated Port Priority Use Area, and the Seaport Plan would not need to be amended in order for the variant to move forward.

The variants site includes a General Plan land use designation of Central Business District north of I-880, and land use designations of RD&E-1, RD&E-2, and Off-Price Retail District under the Estuary Policy Plan. The proposed transportation-related uses would not conflict with these designations and would support General Plan policies of incorporating design features for alternative travel and linking neighborhoods with the waterfront (Policies T4.1 and W2.1), and Estuary Policy Plan objectives to create greater land use continuity between the Estuary waterfront and adjacent inland district (Objective LU-6). The Jack London Square Station would be subject to the Estuary Policy Plan. As discussed in Section 4.10, *Land Use, Plans, and Policies*, the Port Board of Commissioners has the power to provide for development in the Port Area so long as the development and uses of the property within the Port Area are in conformity with the City's General Plan.

The majority of the proposed aerial gondola including the tower and ropeline would be constructed within the City's right-of-way. The Convention Center Station Option 1 cantilevered over the Convention Center would partially be located within a parcel subject to the Central Business District (CBD) Zone, specifically the Central Business District General Commercial Zone (CBD-C), Height Area 6, no limit. The intent of the general CBD Zones include: (1) to encourage, support, and enhance the CBD as a high density, mixed use urban center of regional importance and a primary hub for business, communications, office, government, urban residential activities, technology, retail, entertainment, and transportation; (2) encourage, support, and enhance a mix of large-scale offices, commercial, urban high-rise residential, institutional, open space, cultural, educational, arts, entertainment, services, community facilities, and visitor uses; (3) enhance the skyline and encourage well-designed, visually interesting, and varied buildings; (4) encourage and enhance a pedestrian-oriented streetscape; (5) encourage vital retail nodes that provide services, restaurants, and shopping opportunities for employees, residents, and visitors; and (6) preserve and enhance distinct neighborhoods in the CBD. The intent of the CBD-

C Zone is to create, maintain, and enhance areas of the Central Business District appropriate for a wide range of ground-floor office and other commercial activities. Upper-story spaces are intended to be available for a wide range of residential and office or other commercial activities. The proposed Convention Center Station would not fundamentally conflict with the CBD-C Zone, as the aerial gondola would introduce additional transportation infrastructure in the downtown area. The Convention Center Station Option 2 would be constructed completely within the City's right-of-way, and would require a Major Encroachment Permit, ensuring no conflicts with existing zoning controls.

No new or additional impacts would occur and no new mitigation measures would be required.

Noise and Vibration

Construction

There would be additional construction activities with the Aerial Gondola Variant, resulting in more construction-related noise in new locations: the Jack London Square Station, the Convention Center Station, and for the aerial support tower on Washington Street just north of 4th Street. Construction of the stations and support tower could require installation of piles that could be driven by impact hammer or drilled and then cast-in-place. Sensitive land uses near the Jack London Square station would be approximately 450 feet from the Jack London Inn and 560 feet from the Ellington Condominiums (222 Broadway). The aerial support tower location would be approximately 400 feet from the Z Hotel and 600 feet from the Ellington Condominiums (222 Broadway). Noise from construction of the Aerial Gondola Variant could potentially exacerbate impacts already identified as significant and unavoidable with the proposed Project: Impact NOI-1, temporary or periodic increases in noise from construction; Impact NOI-2, groundborne vibration during construction; Impact NOI-1.CU, contribution to cumulative temporary or periodic increases in noise levels due to construction.

The Convention Center Station would be approximately 50 feet or less from the Washington Inn Hotel and 380 feet from the Condominiums at 555 10th Street. However, the receptors nearest the Convention Center Station are sufficiently distant as to not be impacted by the other construction activities of the proposed Project, unlike activities at the Jack London Square Station. Thus, the noise impacts in the vicinity of the Convention Center Station would not be more severe than impacts identified as significant and unavoidable for the Project. The Project with the Aerial Gondola Variant would be subject to the same Project mitigation measures related to construction noise (Mitigation Measures NOI-1a, NOI-1b, NOI-1c, NOI-1d, NOI-1e, and CUL-2) that would reduce construction noise and vibration to the extent feasible.

Operations

The Aerial Gondola Variant would reduce roadway traffic volumes mobile source emissions compared to the Project, due to a reduction of vehicle miles traveled for people using the gondola as a mass transit option instead of on-road vehicles. The air quality analysis estimates that between 0.3 percent and 10 percent of non-delivery vehicle trips could be replaced by gondola

trips, with the percentage varying based on land use scenario. However, given this wide range of possible reduction percentages and the modest reduction at the lower end of this estimate, the associated reductions to roadway traffic would not be expected to substantially reduce the roadside noise level predictions estimated for the proposed Project, and significant and unavoidable impacts related to traffic would be unchanged (Impact NOI-2.CU, contribution to increased noise due to Project-related traffic, and Impact NOI-3, increased noise due to Project-related traffic and concert events at the ballpark).

Operational noise generated by the Aerial Gondola Variant would be associated with stationary equipment (e.g., drive units, motors, cooling fans) and during operation when the gondola passes over lift towers and into the stations, associated with the gondola cabin arms passing over cable wheels and other discontinuities. Since no on-board motor would be required for the individual cabins (ETSAB, 2018), stationary equipment noise would only be generated at the station points. At this time there are no existing specifications for the proposed motors; however, they would be subject to the restrictions of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code, as required by **Mitigation Measure NOI-1c** (Operational Noise) would apply to the variant such that after completion of the Project (i.e., during Project operation) such sources shall comply with the performance standards.

Operational noise from the gondola would also be generated when the gondola passes over lift towers and at the stations points, associated with the gondola cabin arm passing over cable wheels and discontinuities as the cabin enters the station. This operational noise would also be subject to the restrictions of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code, as required by Mitigation Measure NOI-1c (Operational Noise), to the variant such that after completion of the Project (i.e., during Project operation) such sources shall comply with the performance standards. For these noise sources engineered enclosures around the lift towers and fully enclosing the docking stations can serve to achieve compliance with the standards of the noise ordinance.

Nevertheless, significant and unavoidable impacts related to operations (including baseball and concert events) would be unchanged (Impact NOI-3, increased noise due to operations such as stationary sources, project-related traffic and concert events at the ballpark).

Population and Housing; Public Services; and Recreation

The Aerial Gondola Variant would result in the same population and housing, public services and recreation impacts identified for the proposed Project without this variant (Chapter 4 and Table 2-1.) The development of an aerial gondola would have no impacts on employment or resident generation since it would not alter the development program of the proposed Project. Demands for housing, public services, and recreation would not be affected.

Regarding police, fire and emergency services, during operation, the variant would include private security and operations personnel to assist OFD and OPD during emergencies as previously analyzed. As shown in Figure 4.13-2 in Chapter 4, the variant site north of I-880 is located in an area where OFD is currently meeting its response time goal of to providing

emergency service within 7 minutes of notification 90 percent of the time. Current response times to the variant site south of I-880 are not meeting this goal. With implementation of Necessary Improvement Measure PUB-1, a replacement fire station for OFD Station 2 (re-opening early 2020) would be constructed on the Project site, which would serve the variant site south of I-880.

Additionally, as part of the City's standard development review process, the Project sponsor would be required to submit the gondola plans for Crime Prevention through Environmental Design (CPTED) review by the Oakland Police Department and Bureau of Planning staff. The Project sponsor would then incorporate OPD's recommendations into the final gondola design and implement the design measures. CPTED review and recommendations may address points of access to the variant site or adjacent parcels, and adequate public lighting.

The Aerial Gondola Variant would enhance access to the shoreline, as it would facilitate additional modes of transit from Downtown into Jack London Square and thereby increase the number of visitors using recreation facilities along the waterfront, and it would be subject to the same mitigation measures identified for the proposed Project without the variant to address accelerated physical deterioration of recreational facilities or need for new alternatives. No new or additional mitigation measures would be required for these topics.

Transportation and Circulation

The proposed Project with the Aerial Gondola Variant would encourage more people to take transit and use the gondola to access the Project site. The gondola would have the capacity to transport up to 6,000 people per hour, and like the gondola at the Oakland Zoo (only larger), the gondola also could become an attraction, drawing people to ride the gondola on game days and non-game days alike. With possible increases in transit use and possible increases in trips associated with people coming to downtown Oakland to ride the gondola, it is difficult to project changes in VMT, however it is reasonable to assume some reduction in vehicle trips and associated VMT because the limited available parking downtown, parking management strategies proposed as part of the Project, and readily available transit nearby would encourage gondola riders to use transit. Nonetheless, the proposed Project with the Aerial Gondola Variant, would still increase multimodal traffic using at-grade railroad crossings and contribute to congestion on roadway segments in the Alameda County CMP. The Aerial Gondola Variant would be a strategy to achieve the 20 percent vehicle trip reduction mandated for the Project; therefore, the Aerial Gondola Variant would result in similar impacts to transportation and circulation in this regard.

With the Aerial Gondola Variant, vehicular traffic other than emergency service vehicles would no longer have access to Washington Street, between Embarcadero West and Water Street, due to development of the Jack London Square Station. The Convention Center Station also may result in changes or limited access on 10th Street and/or parts of Washington Street. Also, the diagonal escalator bank may encroach on Water Street, potentially limiting traffic flow compared to existing conditions. As illustrated in Figures 5-17, 5-18, and 5-19, clearance for emergency vehicles would be maintained. Additionally, pedestrian flow would be managed through these areas, particularly on event days when street closures would occur and queuing barriers would be placed at ground level within Water Street for the Jack London Station and within 10th Street for

the Convention Center Station. These potential changes would not cause new significant CEQA impacts but would be managed through the City to ensure safety, traffic flow and emergency access/egress, as well as through adherence to improvements and measures in the Project's Transportation Management Plan (TMP) (see Section 4.15 in Chapter 4). Thus, with some improvement, the variant would result in the *same transportation and circulation impacts and mitigation measures* as identified for the proposed Project without this variant.

Utilities and Service Systems

The Aerial Gondola Variant would result in the *same utility and service system impacts and mitigation measures* identified for the proposed Project site without this variant. The utilities setting of this off-site variant differs from that of the proposed Project. However, proposed within an urban downtown setting, the gondola site is current served by water, wastewater and stormwater facilities supporting a wide-range of land uses.

As previously stated for similar topics in this analysis, site specific information not fully available for the gondola corridor pertain to soil, utilities and other subsurface conditions. However, the conceptual design of the gondola considered underground built infrastructure adjacent to the site to determine the amount and scale of utility relocations, street renovations and foundation areas to support the stations and towers, as well as the conceptual locations of gondola infrastructure (SCJ Alliance, 2019).

The conceptual plans suggest that some new/updated or relocated underground connections to existing infrastructure may be required. As with the proposed Project, the resulting construction-related impacts are identified and mitigated in other parts of this analysis and gondola would be subject to construction-related mitigations as applicable. However, this variant would not change the development program or layout of the proposed Project on the Project site. The additional demands for water and wastewater, and the increase generation of solid waste, would be from the employees to operate and maintain the gondola, and the use of restroom facilities by the gondolas estimated riders. During ballgames or large concerts at the ballpark, the gondola is estimated to carry up to 6,000 users per hour; however, this would not be a continuous level of use, nor are the majority of these users expected to substantially increase the water and sewer facilities through use of restroom in this public transit conveyance.

If this variant is implemented with the proposed Project, all required and necessary site-specific information about the site conditions and project design and operations would be obtained and considered. As is typical for all the analysis in this project-level EIR, to the extent that final variant design and/or site information is substantially different than what is considered herein, appropriate additional environmental analysis would be conducted as necessary in accordance with CEQA requirements.

Mitigation measures identified for the proposed Project require design of a wastewater system and storm drainage system in accordance with City of Oakland's applicable design standards and guidelines; these would also apply to the variant. No new or modified mitigation measures would be required regarding the infrastructure or capacities of existing wastewater conveyance and treatment systems.

5.2.4 Summary

Development of the Project combined with the Aerial Gondola Variant would result in new or different impacts related to historical resources (Impacts CUL-10, CUL-11, CUL-12, CUL-13 and CUL-4.CU), hazards and hazardous materials (Impact HAZ-5), and hydrology and water quality (HYD-6):

- Impact CUL-10 is related to indirect impacts of the Aerial Gondola Variant on the Old Oakland API. Impacts to setting at the northern boundary of the district and overhead through the district through introduction of new gondola-related features would be significant and unavoidable after implementation of Mitigation Measure CUL-7 (Convention Center Station Contextual Design Review) and Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures).
- Impact CUL-11, related to indirect impacts to the former Alameda County Coroner's Office and Morgue at 480 4th Street would be less than significant after implementation of Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), and no new mitigation would be required.
- Impact CUL-12, related to indirect impacts to the West Waterfront ASI would be less than significant after implementation of Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), and no new mitigation would be required.
- Impact CUL-13, related to impacts to the setting immediately adjacent to the Western Pacific Railroad Depot would be less than significant after implementation of Mitigation Measure CUL-2 (Vibration Analysis for Historic Structures), and no new mitigation would be required.
- Impact CUL-4.CU, related to impacts of the Aerial Gondola Variant on the Old Oakland API and its contribution to the significant and unavoidable cumulative, citywide impact identified in the DOSP DEIR would be significant and unavoidable after implementation of Mitigation Measures CUL-2 and CUL-7.
- Impact HAZ-5, related to the potential to encounter hazardous materials on the Aerial Gondola Variant site would be less than significant after implementation of new Mitigation Measure HAZ-3 (Soil and Groundwater Management Plan).
- Impact HYD-6, related to potential impacts to surface and groundwater quality resulting from the Aerial Gondola Variant would be less than significant after implementation of Mitigation Measure HAZ-3.

There would be no new or changed impacts and no additional mitigation measures required for the remainder of topics discussed above.

5.3 Impacts of the Project Plus Both Variants

If both the Peaker Power Plant Variant and the Aerial Gondola Variant were proposed, approved, and constructed as part of the proposed Project, the impacts would generally be as described in Chapter 4, *plus* the impacts described above in Sections 5.1 and 5.2, except where additive or reduced impacts occur compared to the proposed Project.

For both variants combined, criteria pollutant emissions for both construction and operation would be additive. This would result in the same impacts as discussed above for both operations and construction, and no new impacts would be expected. During the year of maximum construction emissions in 2021, construction of the Peaker Power Plant Variant would require an additional 0.7 lbs/day of NO_x emissions compared to the Project; construction of the Aerial Gondola Variant would require an additional 1.4 lbs/day of NO_x emissions compared to the Project. Construction of the Project results in 81 lbs/day of NO_x in 2021, so the combined construction for both variants and the Project would result in approximately 82.7 lbs/day of NO_x emissions in 2021. This exceeds the significance threshold of 54 lbs/day. Therefore, the impact would remain significant and unavoidable with mitigation.

For operations at full buildout in 2028, the combined variants would result in lower emissions than each variant individually because each reduces emissions compared to the project. However, the reduced emissions would still exceed the thresholds of significance at full buildout. For example, in 2028, the Peaker Power Plant Variant results in a reduction of 44 lbs/day of NO_x emissions compared to the project; the Aerial Gondola Variant results in a reduction of 21 lbs/day of NO_x emissions compared to the Project. Project operations in approximately 198.8 lbs/day of NO_x in 2028, so the combined operations for both variants and the Project would result in approximately 133.4 lbs/day of NO_x emissions. Net new emissions would be 114.4 lbs/day of NO_x. This exceeds the significance threshold of 54 lbs/day. Therefore, the impact would remain significant and unavoidable with mitigation.

For health risks, the combined variants would not necessarily result in combined health risks. Because the location of the MEIRs matters, along with the timing of construction and operational TAC emissions, the health risks for the combined variants would not merely be the sum of health risks for both variants. However, the health risks the combined variants are not expected to vary much from the health risks presented for each variant individually. This is because the additional health risks from each variant compared to the Project are minimal, and therefore the combined health risks for the combined variants are also expected to be minimal. For example, the cancer risk for the offsite MEIR for the Project is 6.08 per million, while the cancer risk for the offsite MEIR for the Peaker Power Plant Variant is 6.14. All health risk values for both the Project and each variant are well below the thresholds of significance, so health risks for the combined variants would also be below the thresholds of significance. Therefore, the impact would remain less than significant with mitigation.

For cumulative health risks, the combined variants would result in cumulative total health risks that exceed the cumulative thresholds of significance. This is because the background cumulative health risks already exceed the thresholds of significance without the Project or the variants contribution at all MEIR locations. Therefore, the impact would remain significant and unavoidable with mitigation.

Reduced impacts would occur with regard to GHG emissions, the mitigation obligation for the Project with the Peaker Power Plant Variant and the Aerial Gondola Variant would be less than it would be with the Project in order to meet the “no net additional” emissions threshold under

Impact GHG-1. Therefore, the mitigation obligation for the Project with the Peaker Power Plant and Aerial Gondola Variants together would be even less than if only one of the variants were implemented.

The Project with the Peaker Power Plant and Aerial Gondola Variants together would contribute to different and unrelated historical resources impacts (Impacts CUL-8 through CUL-13), with the exception of the significant and unavoidable cumulative, citywide impact identified in the DOSP DEIR (Impacts CUL-3.CU and CUL-4.CU). As this impact was determined to be significant and unavoidable, the variants would not combine to create a more severe impact.

The Project with the Peaker Power Plant and Aerial Gondola Variants together would also contribute to different and unrelated impacts to hazards and hazardous materials. The impacts and mitigation measures identified to reduce hazards and hazardous materials impacts are site-specific, and geographically separated; thus, the variants would not combine to create a new or different impact. Additionally, the new and different impact related to hydrology and water quality (Impact HYD-6) under the Aerial Gondola Variant is particular to the variant site and would not combine with development of the Project under the Peaker Power Plant Variant to create a new or different impact.

No new or different impacts or mitigation measures would occur as a result of development of the Project with the Peaker Power Plant and Aerial Gondola Variants together.

5.4 Maritime Reservation Scenario

As shown in **Figure 5-2.MRS, Maximum Building Massing Model and Height Plan – Variants and Maritime Reservation Scenario**, the Peaker Power Plant Variant and the Aerial Gondola Variant are not located in areas of the Project site where they would be affected by the Maritime Reservation Scenario. As shown, removal of approximately 10 acres to expand the turning basin would occur at the southwest corner of the Project site, whereas the Peaker Power Plant Variant is in the northeast area of the Project site, and the Aerial Gondola Variant would exist east and north of the Project site, into downtown. Although the Maritime Reservation Scenario would result in some maximum building heights being changed, no changes are proposed to the variant buildings or the development site at Embarcadero West and Clay Street - adjacent to the Peaker Power Plant site where the fuel storage tank would be redeveloped, and one block west of the Jack London Station of the gondola. No new or different impacts or mitigation measures would occur.

Table 5-14, Summary of New and/or Different Impacts and Mitigation Measures with Variants, on the following page lists the impacts and mitigation measures identified that only occur with the Project Variants.

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**Figure 5-2.MRS, Maxiumum Building Massing Model and Height Plan – Variants
and Maritime Reservation Scenario**

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TABLE 5-24
SUMMARY OF NEW AND/OR DIFFERENT IMPACTS AND MITIGATION MEASURES FOR THE PROJECT WITH VARIANTS

Peaker Power Plant Variant		
Impact CUL-8: The proposed Project, with the Peaker Power Plant Variant, would directly impact a historical resource through removal of portions of the east and west wings of the building at 601 Embarcadero West. (Criterion 1) <i>(Significant and Unavoidable with Mitigation)</i>	<p>Mitigation Measure CUL-6a: Peaker Power Plant – HABS Documentation (Level II). Prior to demolition of portions of the building sections located at 601 Embarcadero West, the entire building shall be recorded to the standards required by the Historic American Buildings Survey – Level II. Copies of the documentation shall be deposited locally in the Oakland History Room at the Oakland Public Library and other locations as determined by the City of Oakland.</p> <p>Mitigation Measure CUL-6b: Peaker Power Plant – Secretary of the Interior’s Standards Compliance Analysis. Prior to demolition, architectural plans for the new end walls on the shortened east and west wings and other modifications to the building shall be reviewed by a professional meeting the Secretary of the Interior’s Professional Qualification for Architectural History and/or Historic Architecture to ensure compliance with the Secretary of the Interior’s Standards for Rehabilitation. The professional’s findings and recommendations shall be subject to review and approval by the City. The findings of this review shall be documented in a Standards Compliance Report.</p>	Significant and Unavoidable
Impact CUL-9: The proposed Project, with the Peaker Power Plant Variant, would not impact a historical resource through introduction of new development that could obstruct views into the resource, a character-defining feature of the PG&E Station C API. (Criterion 1) <i>(Less Than Significant)</i>	None required	Less Than Significant
Impact CUL-3.CU: The Project, in combination with the Peaker Power Plant Variant, would contribute to a citywide cumulative impact on cultural and historic resources identified in the Downtown Oakland Specific Plan EIR through the loss of the historic wings of the Peaker Power Plant. <i>(Significant and Unavoidable with Mitigation)</i>	<p>Mitigation Measure CUL-6a (Peaker Power Plant – HABS Documentation [Level II]). (see Impact HAZ-8)</p> <p>Mitigation Measure CUL-6b (Peaker Power Plant – Secretary of the Interior’s Standards Compliance Analysis). (see Impact HAZ-8)</p>	Significant and Unavoidable
Impact HAZ-4: The proposed Project, with the Peaker Power Plant Variant, would have the potential to encounter hazardous materials which could create a significant hazard to the public or the environment. (Criterion 5) <i>(Less than Significant with Mitigation)</i>	<p>Mitigation Measure HAZ-2: Peaker Power Plant Fuel Tank Decommissioning and Training/Oversight. Prior to demolition or removal of the fuel tank, the Project applicant shall have decommissioned the fuel tank parcel, subject to the oversight and inspection of the Oakland Fire Department. The decommissioning activity shall be performed by qualified personnel trained and certified in environmental health and safety procedures pursuant to OSHA 29 CFR 1910.120, HAZWOPER Training requirements, including appropriate training for enclosed space activities. The Project sponsor shall ensure that full-time observation under a Site Management Plan (SMP) during actual removal of the tank shall occur to determine if evidence of subsurface impact is present.</p> <p>Mitigation Measure HAZ-1a: Preparation and Approval of Consolidated RAW, LUCs and Associated Plans. (see Section 4.8, Hazards and Hazardous Materials)</p> <p>Mitigation Measure HAZ-b: Compliance with Approved RAW, LUCs and Associated Plans. (see Section 4.8, Hazards and Hazardous Materials)</p> <p>Mitigation Measure HAZ-1c: Health and Safety Plan. (see Section 4.8, Hazards and Hazardous Materials)</p> <p>Mitigation Measure HAZ-1d: Hazardous Building Materials. (see Section 4.8, Hazards and Hazardous Materials)</p>	Less Than Significant

TABLE 5-24 (CONTINUED)
SUMMARY OF NEW AND/OR DIFFERENT IMPACTS AND MITIGATION MEASURES FOR THE PROJECT WITH VARIANTS

Aerial Gondola Variant		
Impact CUL-10: The proposed Project, with the Aerial Gondola Variant, would result in indirect impacts to the Old Oakland API. (Criterion 1) <i>(Significant and Unavoidable with Mitigation)</i>	Mitigation Measure CUL-7: Convention Center Station Contextual Design Review. Impacts resulting from the introduction of new elements into the Old Oakland API primarily stem from the location, mass, bulk, and design of the Convention Center station. Overhead cars and the ropeline are generally outside the field of vision from observers at ground level within the district. As discussed above, the most impactful element is the gondola station itself. Therefore, the Convention Center Station shall be subject to the City of Oakland's design review (DR) procedures to ensure development of a sensitive and responsive contextual design for the Convention Center gondola station with the Old Oakland API. The design of the Convention Center Station should minimize the horizontal and vertical extent of the new architectural structure to the greatest extent feasible within the final determined design constraints. It should occupy the minimal footprint possible and locate that footprint outside of the Old Oakland API to the greatest extent possible. In addition, the design of the platform should follow the minimal dimensions possible to limit visual intrusions and obstruction within the Old Oakland API. In addition, the stations should be composed of transparent materials, small dimension structural elements, and/or design features that minimize the structure's bulk and mass within the intersection of 10th and Washington streets. Regardless of the final design, the Convention Center Station and platform will still be located within the Old Oakland API, will still have a substantial physical presence in that area of the district, and by its very nature will be a clearly modern transportation-related addition within a 19 th century pedestrian-oriented commercial district. Therefore, this mitigation measure will not reduce the impacts of Gondola Variant to less than significant. Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)	Significant and Unavoidable
Impact CUL-11: The proposed Project, with the Aerial Gondola Variant, could result in indirect impacts to the former Alameda County Coroner's Office and Morgue at 480 4th Street, a historic resource. (Criterion 1) <i>(Less than Significant with Mitigation)</i>	Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)	Less Than Significant
Impact CUL-12: The proposed Project, with the Aerial Gondola Variant, could result in indirect impacts to the West Waterfront ASI. (Criterion 1) <i>(Less Than Significant with Mitigation)</i>	Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)	Less Than Significant
Impact CUL-13: The proposed Project, with the Aerial Gondola Variant, could introduce new structures that could impact the setting immediately adjacent to the Western Pacific Railroad Depot, a historic resource. (Criterion 1) <i>(Less than Significant with Mitigation)</i>	Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)	Less Than Significant

TABLE 5-24 (CONTINUED)
SUMMARY OF NEW AND/OR DIFFERENT IMPACTS AND MITIGATION MEASURES FOR THE PROJECT WITH VARIANTS

Aerial Gondola Variant (continued)		
Impact CUL-4.CU: The proposed Project, in combination with	Mitigation Measure CUL-7: Convention Center Station Contextual Design Review. (see	Significant and Unavoidable

5. Project Variants

the Aerial Gondola Variant, would contribute to a citywide significant cumulative impact on cultural and historic resources identified in the DOSP EIR through changes to the setting of the Old Oakland API. (Criterion 1) (<i>Significant and Unavoidable with Mitigation</i>)	Impact CUL-10) Mitigation Measure CUL-2: Vibration Analysis for Historic Structures. (see Section 4.4, Cultural and Tribal Cultural Resources)	
Impact HAZ-5: The proposed Project, with the Aerial Gondola Variant, would have the potential to encounter hazardous materials which could create a significant hazard to the public or the environment. (Criterion 5) (<i>Less than Significant with Mitigation</i>)	Mitigation Measure HAZ-3: Aerial Gondola Soil and Groundwater Management Plan. Soil and Groundwater Management Plan Prior to issuance of a building permit for the Aerial Gondola Variant, the contractor shall develop and implement a Soil and Groundwater Management Plan (SGMP) prior to commencement of construction activities specifying how the construction contractor(s) will remove, handle, transport, and dispose of all excavated materials in a safe, appropriate, and lawful manner. The SGMP must identify protocols for soil testing and disposal. Contract specifications shall mandate full compliance with all applicable local, state, and federal regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in excavated soil. Hazardous Waste Management Procedures If soil classified as hazardous waste is encountered, the material shall be managed as hazardous waste pursuant to CCR Title 22, Division 45, in accordance with the following procedures: <ul style="list-style-type: none"> • Excavation and transportation will be performed by OSHA-certified personnel, as needed and required by all federal, state or local laws. • Soil will either be characterized in-situ, or staged on site for characterization. If all or any portion of the soil is determined to be hazardous waste, such portion will be managed and have a disposition in accordance with applicable hazardous waste regulatory requirements. • Breathing zones shall be monitored for dust control. • All haul trucks (including those transporting soil, sand, or other loose material including demolition debris offsite) will be covered, as required by the applicable laws. • Soil that is visibly impacted or has an odor will be stockpiled onsite, if needed, and will be placed on 10-mil plastic sheeting, or equivalent, pending characterization. As necessary, based on meteorological and Site conditions, the soil stockpiles will be protected and secured to prevent dust or runoff during storm events. Groundwater Dewatering Controls As part of the SGMP, the contractor shall develop a groundwater dewatering control and disposal plan specifying how groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate and lawful manner. Consistent with Best Management Practices (BMPs), the SGMP must identify the locations at which groundwater dewatering is likely to be required, the test methods to analyze groundwater for hazardous materials, the appropriate treatment and/or disposal methods, and approved disposal site(s), including written documentation that the disposal site can accept the waste. The contractor(s) may also discharge the effluent under an approved permit to a publicly owned treatment works, in accordance with any requirements the treatment works may have. Site-Specific Health and Safety Plans (HASPs)	Less Than Significant

TABLE 5-24 (CONTINUED)

SUMMARY OF NEW AND/OR DIFFERENT IMPACTS AND MITIGATION MEASURES FOR THE PROJECT WITH VARIANTS

Aerial Gondola Variant (continued)		
Impact HAZ-5 (Cont.)	The contractor shall develop a site-specific HASP as part of the SGMP to ensure that construction activities are performed in a manner protective of the health and safety of site construction workers and of interim site uses in the construction zone(s). The HASP is a mechanism through which the workers involved in the construction are informed of the presence of chemicals in the area prior to initiating work. Review and Approval	

	The SGMP shall be submitted to the DTSC and the Port of Oakland for review and approval prior to commencement of construction.	
Impact HYD-6: The proposed Project, with the Aerial Gondola Variant, could violate surface water and groundwater quality standards, result in erosion or siltation on- or offsite that could affect receiving water quality, and/or substantially degrade surface water and groundwater quality and conflict with implementation of a water quality control plan. (Criteria 1, 3, and 7) <i>(Less than Significant with Mitigation)</i>	Mitigation Measure HAZ-2: Aerial Gondola Soil and Groundwater Management Plan (see Impact HAZ-5)	Less Than Significant

References

- Avian Power Line Interaction Committee (APLIC). 2012. Reducing Avian Collisions with Power Lines: The State of the Art in 2012. Edison Electric Institute and APLIC. Washington, D.C.
- Oakland Cultural Heritage Survey (OCHS), *Historic Resources Inventory Form for Old Oakland*, 1984.
- Dover, Kohl & Partners, *The Downtown Oakland Specific Plan: Public Review Draft Plan*, prepared for the City of Oakland, August, 28, 2019.
- Edmonton Transit Service Advisory Board (ETSAB), 2018. *ETSAB: Urban Gondolas in Public Transit*, June 5, 2018. https://www.edmonton.ca/city_government/documents/transit/ETSAB_Urban_Gondolas_in_Public_Transit.pdf, accessed January 23, 2020.
- ESA, Inc, *Architectural Resources Technical Memorandum*, Prepared for the City of Oakland, July 24, 2019.
- Jacobs Engineering Group, *Historical Evaluation of Crane X-422, Port of Oakland, Alameda County, California*, Prepared for the Port of Oakland, 2019.
- Moffat & Nichol, 2019. *Tidal Datums and Sea Level Rise Design Basis*, Prepared for the Oakland Athletics, December 18, 2019.
- Northwest Information Center (NWIC), California Historical Resources Information System (File No. 18-1077), December 5, 2018.
- SCJ Alliance, *Oakland A's Ball Park Access Gondola, Conceptual Design Summary*, April 2019
- Urban Planning Partners, *Downtown Oakland Specific Plan Draft Environmental Impact Report*, prepared for the City of Oakland, August, 2019.

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